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ABSTRACT

A research project determined the impact of workplace language and literacy inclusive training (LLIT) on key aspects of the workplace in regard to the process of workplace change. Over 500 respondents in more than 30 different Australian workplaces representing 13 industries across 5 Australian states took part. The study developed and used five measuring instruments focusing on aspects of the workplace identified by interviewees as those in which training had the most impact: direct cost savings, access to and acceptability of further training, participation in teams and meetings, promotion and job flexibility, and the value of training. Findings were as follows: the majority of respondents felt their workplace had made perceptible cost savings they linked directly to LLIT in their workplace; workplaces with available statistics or estimates showed LLIT programs increased participants' access to and acceptability of further training; LLIT increased greatly worker participation in teams and meetings; LLIT had a positive and considerable impact on improving worker flexibility in the workplace and had a strong bearing on the ability and willingness of workers to apply for promotion or to respond to workplace encouragement to do so; and LLIT had an emphatic impact on such workplace issues as worker morale, confidence to communicate, and management/"shopfloor" relations. (YLB)

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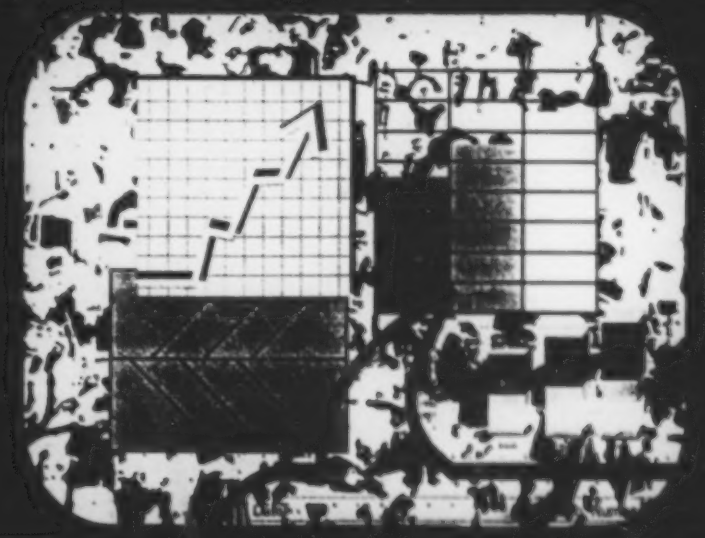
MORE THAN MONEY CAN SAY

The impact of ESL and literacy training in the Australian workplace

Volume I

The executive summary, the findings and the case studies

ED 413 451



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AUSTRALIAN LANGUAGE AND LITERACY POLICY
NATIONAL ADULT LITERACY PROJECT 1995 / 6

More than money can say

The impact of ESL and literacy training in the Australian workplace

Volume I

The executive summary, the findings and the case studies

NATIONAL ADVISORY COMMITTEE

Dr Paul Brock	Special Adviser, Australian Language and Literacy Council, Canberra
Ms Robyn Bergin	National Co-ordinator, WELL Program, DEETYA, Canberra
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Dr John Fairhall	Statistical Researcher, Perth
Ms Nicole Gilding	Principal Policy Officer, VET - DETAFE, Adelaide
Mr Paul Little	Skills Development Officer, Goodman Fielder Milling, Sydney
Ms Carolyn Ovens	Training Liaison Officer, ACTU Queensland Branch, Brisbane
Mr Simon Wallace	Principal Project Officer, National Staff Development Committee, ANTA, Melbourne

PROJECT TEAM

Geoff Pearson	Project Manager
Robert Bean	Researcher (South Australia)
Judy Duffy	Researcher (New South Wales)
Marie Manidis	Researcher (New South Wales)
Geoff Pearson	Researcher (Western Australia)
Tanya Wolkenberg	Researcher (Victoria)
Linda Wyse	Researcher (Victoria)

More than money can say:
the impact of ESL and literacy training in the Australian workplace

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Finally, many thanks to all the members of the Advisory Committee and to the tireless research team (see previous page).

Geoff Pearson
Project Manager

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How to use this document

This report is divided into four sections. Sections A, B and C are in this present volume. Section D is presented separately in Volume II.

Section A: ***The executive summary***	This section contains the principal findings and the report's recommendations. It is a summary of Sections B and C.
Section B: ***The findings***	This section contains all of the findings, summarised and interpreted. It is a synthesis of Sections C and D.
Section C: ***The case studies***	This section contains case studies of nine of the workplaces involved in the study.
Section D: ***The statistical overview***	This section contains all of the study's statistical data on which the findings are based. This information is presented in Volume II of the report.

Each section begins with a coloured title page for easy reference and Sections A, B and D are presented using the same five principal headings in the same order:

- **Direct cost savings**
- **Access to and acceptability of further training**
- **Participation in teams and meetings**
- **Promotion and Job Flexibility**
- **The value of training**

In this way, greater detail may be more readily located relating to each finding. Where relevant, cross-references are given to the case studies.

For general ease of reference, there is a contents list at the beginning of each section.

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Section A:
Executive Summary

Executive summary

In an international marketplace that has placed ever-increasing pressure on all would-be players to produce higher quality products at competitive prices, Australian workplaces have had to implement enormous change over the last 15 years in order to survive.

The changes have been wrought across the board. In the process, the 'shopfloor' and its workforce have become more and more the focal point for much of that change, with new demands being placed on all workers to work 'smarter not harder'. With a workforce raised and educated largely in an era which preceded the processes of Workplace Change and the Micro-chip Revolution, the fundamental need for wholesale workplace training in new skills has become evident. The future of many workplaces will depend on the success of that training.

Quality and Training

The key driving force behind the need for workplace change - and therefore training - has been Quality. Where a workplace can meet national and international Quality standards, it can continue to compete. But, as more and more workplaces achieve Quality Accreditation, those which lag behind face the prospect of dwindling markets and eventual failure.

Preparing the new workforce to meet the new market demands has involved the implementation of a whole range of measures, from restructuring and multi-skilling to the introduction of workteams and new technology. Those with the necessary skills to meet all the challenges were few. And for each worker unable to participate fully in the new workplace, less productivity, efficiency and

safety will result. For the most effective outcome of this process of workplace change, all workers need to be involved.

Language and literacy

Language and literacy inclusive training programs have occurred in Australian workplaces for more than 20 years. In the early years, they were primarily run to improve the English language skills of non-English-speaking-background workers. However, with the advent of International Literacy Year (1990), national research identified that this focus was skewed. One in ten of all adult Australians was found to have some form of literacy difficulty. The implications of this for workplace change were enormous, and the focus of workplace programs shifted quickly to encompass all workers.

Just as important, however, is the issue of continuous acquisition of language and literacy skills in a changing workplace environment. Many workplaces recognised that the demands of workplace training placed new demands on workers in terms of language and literacy skills. The very changes in workforce restructuring and the developments in computer-based technology meant that even those workers with good language and literacy skills would need to have these skills upgraded. There were in effect new applications of language and literacy skills which had previously not existed.

Although a great deal of research and evaluation of the impact of workplace language and literacy training programs has occurred in the past, it has generally been focussed on qualitative analysis of the success of such programs. Training provider evaluation has usually centred on what participants have achieved *within the training room*. When evaluation has moved beyond the training room to the workplace itself, most of the evidence has been anecdotal.

There was therefore a perceived need to determine the impact of language and literacy training on the workplace in quantitative terms.

The impact of ESL and literacy training in the Australian workplace

The current research project was designed to determine the impact of workplace language and literacy training on key aspects of the workplace in regard to the whole process of Workplace Change. It was conducted from June 1995 to April 1996 by a team of five researchers across NSW, VIC, SA and WA.

The findings

More than 500 respondents in over 30 different Australian workplaces representing 13 industries across five states have taken part in this study. The interviews, questionnaire returns, and in-depth follow-up research show that there have been significant gains in productivity, efficiency and economic competitiveness linked directly to workplace English language, literacy and numeracy inclusive training.

The study, focussing on workplace respondents from senior management, unions, supervisors, and workers, has also provided the stakeholders in the workplace education field with a body of empirical data as well as quantitative and qualitative information on the impact of such training on the workplace.

The findings of the study include some dramatic results, a corroboration of common assertions, and a quantification of subjective impressions. They also highlight a range of practical issues which demand serious consideration in future programs.

The study developed and used five different measuring instruments focussing on aspects of the workplace which the workplace interviewees themselves had identified as the areas in which effects of the training had been most keenly felt. These were:

- **Direct cost savings**
- **Access to and acceptability of further training**
- **Participation in teams and meetings**
- **Promotion and job flexibility**
- **The value of training**

The major findings are listed under these headings in the remainder of this *Executive Summary*. The same headings are used in Sections B and D where further details for each may be found.

Nine of the workplaces are also the subject of individual case studies where specific effects or issues are described in more detail. These are presented in Section C of this document.

Direct cost savings

Despite the difficulties commonly associated with measuring the impact of training on the workplace itself, this research project has been able to identify and quantify direct cost savings accruing from language and literacy inclusive training in several of the participating workplaces. They are:

• Civil & Civic / Lend Lease Interiors, NSW	• $4.75 million (cost / benefit analysis) • $60,000 in recovered crane costs at one construction site • $64,500 (estimated) saved in 'unproductive' labour costs • $10,000 (estimated) in recovered forklift costs at one construction site
• Johnson and Johnson Medical, NSW	• 10 jobs saved • $250,000 (estimated) saved in avoided redundancy payments • $40,000 per annum saved in salaries
• Victorian Hide and Skin Producers, VIC	• $82,080 per annum saved in reduced downtime • $10,670 per annum saved in reduced maintenance costs
• Visy Board (WA) Pty Ltd, WA	• 2% increase in productivity on one machine
• St. John of Kronstadt, VIC	• $50,000 - $60,000 per annum increase in government funding
• Goodman Fielder Milling, NSW	• $21,700 (estimated) per annum in 'unproductive' labour costs • $4,660 per annum reduction in flour giveaway
• Haigh's Pty Ltd, SA	• $4,900 per annum reduction in 'unproductive' labour costs

All of these findings are documented in the *Case Studies* (Section C).

The *Direct cost savings* instrument administered in 16 workplaces also provided a considerable amount of other information. In summary, the principal findings were:

- The majority of respondents[1] (70% on average) considered that their workplace had made perceptible cost savings which they linked directly to the language and literacy inclusive training in their workplace.

- The degree of saving was in general perceived to be higher by those who rated the skills as "Not good" before the training.

- Although both manager and supervisor respondent groups on average indicated savings, 20 - 30% more managers than supervisors indicated savings in each area surveyed.

- The nature of the savings made across the 24 workplaces varied greatly.

  - The most consistently identified savings related to time-saving, both of supervisor time and worker time, in carrying out work-related language and literacy tasks.

  - The other most significant type of saving resulted from more accurate and fuller completion of workplace documentation.

- The amount of savings across the 24 workplaces varied greatly.

  - The estimated savings on 'unproductive' labour costs per participant per week for each language, literacy and numeracy skill[2]surveyed were:

    - $9-$77 with the majority falling between $19 and $44 per training participant per week (average range)
    - $16-$28 per training participant per week per skill surveyed (median range)

  - Of those respondents who considered that there were no savings to report, the overwhelming majority were supervisors.

[1] Management and Supervisors only answered this measuring instrument
[2] Refer to Table 4 in Section B for precise details

Access to and acceptability of further training

The *Access to and acceptability of further training* instrument provided a considerable amount of information indicating that language and literacy inclusive training has a considerable effect in this area. In summary, the principal findings were:

- Despite a general lack of statistics in the workplaces studied relating to improved access to other workplace training for language and literacy participants, those workplaces which could supply statistics or estimates showed that language and literacy inclusive training programs increased participants' access to and acceptability of further training.
- There was no evidence to support the opposite view.
- 72% of managers and 63% of participants considered that worker attitudes towards training had improved significantly or enormously as a result of the language and literacy inclusive training.
- On the issues surveyed relating to workplace improvements occurring as a result of language and literacy participants taking on further training, most of the respondents in the eight participating workplaces indicated some improvement.
- On average, supervisors rated the improvements higher than managers. Supervisors generally rated the improvements closer to "significant" while managers generally rated them between "slight" and "no change".
- In terms of accessing, applying for and coping with further training, participants overwhelmingly considered that the language and literacy training had helped them in all these areas.
- For many participants, it had also improved their attitude towards taking on further training.

The study has shown a direct correlation between the provision of language and literacy inclusive training and the subsequent successful entry into specific job-skills training programs by workers who would otherwise not have applied for or completed training courses. The following are specific instances identified by the research.

• Don Smallgoods, VIC	• 66% of language and literacy inclusive training participants completed three units of the National Certificate in Food Processing • 25% completed a further unit at the next level • Six out of eight workers completed all three Industrial Communications modules of the same certificate • One female worker progressed from the lowest level in the workplace and took on an Office and Management course at the Victorian University of Technology
• Bridgestone Australia Automotive Components Division Pty Ltd, SA	• Amongst a team of 45 workers, 100% could now apply for training courses compared with only 55-60% beforehand
• Victorian Hide and Skin Producers, VIC	• Enabled fleshing team to access workplace skills training in fleshing and trimming resulting in enormous savings in reduced downtime and maintenance costs (see *Direct Cost Savings)*
• Haigh's Pty Ltd, SA	• All participants achieved Hygiene and Sanitation A Module of the National Certificate in Food Processing
• Alintagas, WA	• Bridging course enabled three workers to pass entrance examination to gain access to Gas Fitter II training program
• Monroe Australia Pty Ltd, SA	• Amongst 28 workers, 26 have completed "Team Dynamics" training with the remaining two awaiting assessment. • 8 are pending assessment in "World Competitive Manufacturing" • 3 have completed "Monroe Australia Problem-solving"

Participation in teams and meetings

The research has shown that worker participation in teams and meetings is greatly increased by language and literacy inclusive training. The following are the study's principal findings in this area:

- With the exception of minute-taking skills, all other aspects of team meetings surveyed were considered by a large majority of managers and supervisors (between 72% and 95%) to have been improved to some degree.

- Most of the improvements were perceived to be greater by those who had rated them as "Not good" before the training. One notable exception to this was 'team spirit' which was perceived to have improved most by those who had considered it "satisfactory" before the training.

- The general amount of participation in meetings was perceived to have risen considerably, regardless of pre-training ratings.

- Supervisors and managers registered that two out of every three language and literacy training participants showed an improvement in their level of team participation after the training.

Promotion and job flexibility

The research indicates quite clearly that language and literacy inclusive training has a positive and considerable impact on improving worker flexibility in the workplace, and also has a strong bearing on the ability and willingness of workers to apply for promotion or to respond to workplace encouragement to do so.

The principal findings in this area were:

- Both the manager / supervisor group and the participant group cited equally considerable gains in all but one of the aspects of job flexibility that were surveyed.
- Both groups cited enormous improvements in workers now able to move from one workplace task or role to another, to take on further responsibilities or duties in situations of need, and to take on tasks involving the use of reading, writing or verbal skills.
- The improvements all fall within a range of 300% - 1000% increase in the numbers of workers able to fulfil these tasks since the language and literacy inclusive training.
- The ability to be successfully redeployed to another task rated comparatively modestly.
- "Use of existing knowledge and skills" was most commonly cited by managers and supervisors as their reason for wishing to promote internally rather than to recruit from outside the workplace.
- Of the participants who had sought promotion since the language and literacy inclusive training, the most commonly cited reasons for doing so were:
    - improved language and literacy skills
    - improved confidence
- "Improved verbal skills" and "financial need" ranked almost as highly.

The value of training

The *'Value of the training' survey,* carried out in 31 workplaces, focussed primarily on the improvement of personal and interpersonal aspects of the workplace such as worker morale, confidence to communicate, and management / 'shopfloor' relations. The results point to language and literacy inclusive training having an emphatic impact on these workplace issues. The principal findings were:

- The vast majority of managers (89%), training participants (78%), supervisors (76%) and union representatives (88%) considered that the whole range of workplace and workforce issues surveyed had improved as a result of language and literacy training in their workplace.

- In the majority of cases, the degree of improvement was perceived to be highest when the issue in question was rated as "Not good" before the training took place.

- For most of the 'generic' workplace language and literacy skills surveyed, more than 50% of participants considered they already had these skills before training commenced.

- Amongst those who considered they did not have the surveyed skills before the training, between 60% and 78% (depending on the specific skill) stated that they now had them.

- Large numbers of workers did not perceive the 'generic' skills surveyed to be a part of their job. The size of this group varied from 10% to 28% depending on the skill surveyed.

- Language and literacy programs which were integrated with the specific agenda of the particular workplace generally drew the highest improvement ratings from the respondent body.

Recommendations

As a result of the findings outlined in this document, the following recommendations are made. They have been grouped under subheadings which help to identify the people, agencies and organisations to whom they pertain.

Policy and Funding Bodies

It is recommended:

1. that funding bodies and training providers actively promote and monitor the implementation of effective evaluation mechanisms in workplaces where language and literacy inclusive training is carried out;

2. that government agencies, industry bodies, trade unions and training organisations promote, as best practice models, those workplace language and literacy training programs where language and literacy skills are:

   2.1. fully integrated into all mainstream workplace training programs; or are

   2.2. developed in discreet programs integrating language and literacy skills with relevant industry competency standards, with industry certificates, with other workplace training programs, or with the specific agenda of the particular workplace, and which are seen as a precursor to the full integration of relevant language and literacy skills into all workplace training;

3. that funding bodies seek to ensure that stand-alone 'general English' or 'generic, work-related' language and literacy training programs or courses are not promoted as a best practice model;

4. that all policy-making and funding bodies address and promote, throughout the Vocational Education and Training sector and in their dealings with industry, the notions that:

   4.1. language and literacy is a key element in all training situations;

   4.2. the language and literacy skills required of participants for successful participation in workplace training programs need to be made explicit and addressed as part of the program; and

4.3. those language and literacy skills required of participants in the performance of tasks in the workplace on completion of workplace training programs should also be made explicit and addressed as part of the program.

Workplaces and Training Providers

It is recommended:

5. that workplaces examine carefully the ability of language and literacy training providers:

   5.1. to demonstrate understanding of workplace needs and objectives;

   5.2. to integrate these into any discrete language and literacy inclusive training programs; and / or

   5.3. to help the workplace to identify and integrate these into all workplace training programs;

6. that the evaluation of the impact on the workplace of any language and literacy training carried out by any stakeholder:

   6.1. occur before, during and after the program in real time, not in hindsight; and

   6.2. include a clear identification of the intended measurement foci and performance indicators (i.e. the intended outcome of the program, the aspects of the workplace to be monitored, and how, by how much, and over what period);

7. that management, supervisors and union representatives (or worker representatives where no union is present) be actively involved with training providers in the establishment of a supporting infrastructure for the language and literacy inclusive training program and that they maintain a commitment to the program and to its related evaluation processes;

8. that, where the following are cited as workplace goals partly or wholly related to the training, the relevant measuring instrument(s) developed by the current study be used by the appropriate joint consultative committee as a model for pre- and post training evaluation of the impact of the training on the workplace:

   - ensuring access to further training for all workers
   - improving worker involvement and participation in teams and team meetings
   - improving worker flexibility and multi-skilling
   - improving internal promotion rates

9. that the findings of the study inform the development of Professional Development programs for training providers involved in the delivery of workplace language and literacy inclusive training;

10. that frontline and senior management in workplaces conducting language and literacy inclusive training be given training in the following essential areas:

    - cross-cultural awareness
    - managing cultural diversity
    - language and literacy issues in training and in the workplace
    - Plain English.

Follow-up to the study

It is recommended:

11. that the findings of this research project be disseminated as widely as possible throughout the Australian industry and training communities by the sponsoring Federal Department, DEETYA, using the following strategies:

    11.1. publicity, through press releases to the major newspapers and agencies, of the major findings and the availability of the report;

    11.2. distribution of a newsletter containing the same press release and additional information as appropriate to all the individuals and organisations on the research project's mailing list;

    11.3. distribution of press releases of the major findings and the availability of the report to the key journals of the language and literacy field, Human Resource Development field, employer and industry associations, trade unions, the wider VET sector and other educational bodies.

12. that appropriate bodies (such as ITABs):

    12.1. conduct workshops / seminars targetting both industry and training providers to determine how sector / industry-specific pre- and post-evaluative tools could be developed and thus provide models for the design of enterprise-specific tools,

    12.2. co-ordinate the development of guidelines for determining what is to be assessed and the process to be implemented to ensure that this is done, and

    12.3. encourage training providers and industry to jointly participate in Action Learning projects:

12.3.1. to identify what needs to be measured and what measuring tools could be used,

12.3.2. to develop enterprise-specific models, and

12.3.3. to document guidelines which could be used by other enterprises.

13. that evaluative instruments designed on the basis of workplace goals be designed with reference to nationally accepted reporting systems (e.g. the National Reporting System);

14. that the measuring instruments developed during the course of this study:

14.1. be used as a guide to training providers and workplace personnel to develop other, more enterprise-specific instruments which seek to quantify changes which have occurred as a result of the training in their workplace; and

14.2. be modified to take account of the fact that workplaces:

14.2.1. rarely have easily obtainable 'impact of training' data
14.2.2. do not organise information about their workers based on gender and background

15. that any further research carried out in the field of evaluation of the impact of ESL and literacy training in the workplace seek to develop consultative instruments which could be applied in any workplace to help clarify the short, medium and longer term objectives of planned language and literacy inclusive training.

Section B: The findings

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Context

For many on both sides, the two vastly different fields of international exports and competitiveness in industry, on the one hand, and language and literacy skills development on the other, have no immediately apparent relationship. However, over the last 10 to 15 years, a great many Australian industries, enterprises and training providers have come to recognise this as a regrettable misconception. It is even more regrettable that there are many who still need convincing of the importance of this relationship to Australia's future economic well-being.

Workplace change

Since the early 1980s, and even earlier for some, a major shift has occurred in the way Australian industries and enterprises have had to organise themselves and their workforces. With ever increasing international emphasis on exporters to meet stringent Quality Standards not just in the final product, but at every stage in its design, development and manufacture, Australian companies like those of any others who would join the fray have had to reappraise the way they do things. Quality is no longer an exercise practised just at the luxury end of markets. With the setting of both process and outcome standards, Quality has become measurable and therefore a means by which the reliability of any product and / or service of any workplace may be assessed and demanded.

So pervasively has this become a part of the international marketplace that it has spilled over into Australia's own internal markets. For example, the HR Manager of one food company featuring in this present study indicated that the larger supermarket chains were now demanding Quality Endorsed status of all their suppliers. If an Australian company could not deliver, then an off-shore supplier would be found. By the turn of the millennium, there will surely be few Australian workplaces which will not have been affected by this reality.

Because the demands of Quality standards, such as the ISO 9000 and AS3000 series, are focussed not only on the outcome but also on the process, it is not something which only management or supervisors need concern themselves with. The process of producing a product or delivering a service is dynamic and maintaining the quality of everything that happens in that process is only possible if all those involved with it understand the need to consistently meet the standards. The manufacturer or service provider also expects his / her suppliers to be delivering Quality controlled and assured material, for if the materials you start with are not 'up to scratch' then that will obviously negatively affect every further stage down the line.

In a nutshell, if Quality Standards are to be reached and maintained, then everyone involved in the process must be involved in ensuring this occurs.

A usual concomitant of the implementation of Quality Standards and Quality Assurance systems has been the concept of continuous improvement. This recognises that there is a need to reach the set Quality standards in the most cost-effective ways. What it also recognises is that the people most likely to recognise sources of inefficiency or production problems are those who encounter them on a daily basis. That is, management may have the broader view, supervisors

perhaps a section-based view, but it is the individual worker who perhaps has the most precise task-based view. A recognition of this, and its relevance to the concept of continuous improvement, is another of the primary forces behind the drive towards restructuring workforce organisation. In essence, this has meant the setting up of workteam-based structures which require the workforce to play a key role in considering, planning responses to and implementing solutions to problems in their area of the workplace. For a workforce which traditionally was supervised and instructed rather than consulted, such a structure is not only new, but for many quite threatening.

Into this picture of the changing workplace we should also add three other factors of considerable change: the greater need for safety awareness, multi-skilling, and new technology.

Whether for philanthropic or economic reasons, the need for Occupational Health and Safety awareness has grown enormously over the last decade. There has been a general recognition, by medium-sized and larger companies at least, that safety is an essential element of the productivity / cost equation. It is also recognised as an important element in all Quality Standards.

The removal of previous job demarcations through the Award Restructuring process of the late 1980s and early 1990s has enabled and encouraged the development of multi-skilling. Workers previously confined to the performance of a single task or role in a manufacturing process or a service have been 'freed up' to be moved from one task to another within the limits of the worker's new award classification. However, although this has meant that the workforce is potentially much more flexible, it has also meant that workers need to learn new workplace skills. This may be made even more crucial when the task involves working with new technology.

New technology, as such, is not a new concept. Workplaces have always sought to cut costs by using the most efficient machinery available to them. However, since the late 1970s, the development of computer-based technology has transformed the type of machinery that is available for this purpose. Computer keyboards, monitors, touch-screens, on-line processing and monitoring devices, liquid crystal display windows have all appeared over the last 10 to 15 years. The workforce, however, has largely been the product of an education system from before this period. The skills shortfall between the education system of the pre-micro-chip revolution and new technology has been all too obvious.

In the face of this great movement of change, working harder, as the saying went (and still goes), would, alone, not yield the necessary results. The buzz phrase was the need to 'work smarter'.

The principal way forward was seen to be training. The medium-sized and larger companies, as witnessed in several of the case studies in this project, introduced training programs to help effect the necessary changes in the current workforce. Occupational Health and Safety, Employee Development Program, Team Meeting Skills, Conflict Resolution Skills, Quality Assurance, Total Quality Management, Value-Added Manufacturing, Continuous Improvement - these training program titles that have become commonplace over the last ten years clearly identify the prevailing focus. Furthermore, this training has been ever-increasingly directed at all levels of the workforce including the 'shopfloor'.

So where is the nexus between this and language and literacy skills development?

Language and literacy skills training

As part of Australia's contribution to International Year of Literacy, 1990, a study of adult literacy in Australia entitled *No Single Measure* (R.Wickert) shattered the myth that the country's literacy problems were confined to the migrant population. The study showed conclusively that all Australians were involved, and that as many as one in 10 adults had a literacy problem.

A year later, the Federal Government issued a White Paper called *The Australian Language and Literacy Policy* in which it identified the improvement of the nation's literacy levels as a priority. In the same year, a federal initiative called the Workplace English Language and Literacy (WELL) Program was established to encourage the development of workplace-based language and literacy skills training programs. Since the 1970s, workplace-based language skills improvement programs had occurred, but were almost entirely focussed on NESB workers. These were primarily funded through the then Department of Immigration, Local Government and Ethnic Affairs (now DIEA).

From 1991, however, workplace language and literacy skills training programs focussed on ESB and NESB workers alike. Initially concentrating on bringing workers' literacy levels 'up to speed', many programs foundered and became marginalised in workplaces which could not see the relevance of the training to their essential business. However, from 1992, as the concept of integrated training began to emerge in line with other key developments in the Vocational Education Training sector, the programs became more workplace-needs focussed and their considerable impact on workplaces began to be better understood.

The Link

A general need to make the post-secondary training sector more aware of and more focussed on teaching skills relevant to the needs of industry led to the establishment of the Australian National Training Authority at the beginning of the 1990s. Under its auspices, a network of industry training boards and councils was developed over the ensuing five years, co-ordinated through the National Training Board. The principal purpose of the network was to work with each industry to develop its own set of competency standards which would be considered necessary for workers in the particular industry. This also provided entry levels in terms of industry competencies which post-secondary students needed to attain.

The national co-ordination effort established the Australian Standards Framework against which each industry was to map its own standards so that their attainment could be accredited and be made nationally portable across industries. The training that would ensue was to be competency-based training (CBT). Time-serving in an industry or in a training program was no longer *de rigueur*. What mattered in the new order was that workers and trainees could demonstrate competence. Along with the development of CBT came the concepts and processes of Recognition of Prior Learning (RPL) and Recognition of Current Competence (RCC) under which, competence gained by means other than training in Australian educational institutions could be recognised. This whole process has generally been referred to as the National Training Reform Agenda (NTRA).

While this has been occurring on the general vocational training front, the language and literacy field has been developing a National Reporting System mechanism for the reporting of competence in adult English language, literacy and numeracy to complement developments in the general vocational education and training sector.

Each industry has proceeded with the National Training Reform Agenda at its own pace, some moving along the path of developing its own particular set of competencies much faster than others. Many who have now completed this initial process haye also developed accredited industry certificates which are recognised nationally. In all of the certificates developed to date, communication skills and maths skills form an integral part.

The reasons for their inclusion come from two main notions. The first is that basic language and literacy skills are required in order to ensure access to training for those workers with language and literacy difficulties. The second is that new workplace skills requiring communication of any sort (for example, operating in team meetings, completing in-process Quality documentation, or non-conformance reporting) require specific communication skills. The traditional assumption that these skills somehow develop organically has been replaced by one which includes a need to ensure their development by addressing them as part of the training and competency-based assessment processes.

Despite the development of the various portable industry certificates, some of which are still in their developmental stages, many workplaces prefer to run language and literacy training which is more closely aligned with their specific needs at an enterprise level. That is, not all language and literacy training programs form part of a certificate-based course being run in the workplace.

Within this study, there are workplaces which have run language and literacy inclusive training programs whose focus was on such issues as team meeting procedures, problem solving instruments, report writing, completing Quality Assurance documentation, as well as allied to other workplace skills training such as fleshing (Victorian Tannery), working in confined spaces (South Australian construction companies), wool quality analysis (NSW wool combers) and gas service fitting (Western Australian gas supply company). None of these particular programs was specifically tied to an accredited industry certificate, although many of the competencies achieved by participants would also feature in industry certificates which already exist and the processes of RPL and RCC would allow for their recognition.

In spite of these superficial differences, what all of the workplaces in this study have recognised is that language and literacy skills development is not a matter of running 'English classes for the workers'. Their perception is much more sophisticated. They have seen the direct link between the development of competence in language and literacy skills and successful workplace training. They have seen the direct link between competence in language and literacy skills and increased job flexibility, effective workteams, better Quality Assurance, better safety practices, and greater readiness to accept and use new technology. Most of all, through these improvements, they have seen the link between competence in relevant work-related language and literacy skills and higher productivity and competitiveness.

The purpose of this project report is to describe the nature of that link and, as far as possible, to do so in quantitative terms.

The purpose of the project

The vast bulk of previous research in this area has focussed on qualitative evaluation of the value of language and literacy training programs in the workplace. Case studies and evaluation reports of programs have invariably indicated that such training programs are considered by training providers and workplace personnel alike to be of great benefit to the workplaces where they have been conducted. However, the evidence produced has been overwhelmingly anecdotal with very little research having been carried out which has attempted to quantify the gains made.

The purpose of this research project, therefore, was to establish and, wherever possible, to quantify the impact of ESL and literacy training run in Australian workplaces.

The project report was to include:

- the data and information collected;
- a synthesised analysis and interpretation of the findings;
- recommendations based on these findings; and
- a set of mini-case studies of participating workplaces.

In the event, case studies for only some of the workplaces are presented. The key reason for this is that only some workplaces could provide a specific quantifiable example of a workplace gain which had occurred as a direct result of the language and literacy training conducted.

It should be pointed out that those workplaces where such gains could not be linked directly and / or solely to the language and literacy training nevertheless consider that the training has been of great benefit to them.

A note on quantifying

It was never the aim of the project to come up with an equation along the lines of:

X hours of training x Y number of trainees = Z dollars of increased productivity

Apart from the enormous difficulty there would have been in attempting to establish such an equation which could reliably reduce all the variables to one figure, the answer it gave could never hope to describe the broad range of impact points which the research team felt certain they would find.

From the outset, therefore, it was the intention of the research team to identify the key areas in which language and literacy training played a significant role in improving the workplace and to describe the impact on each, using as much supporting empirical evidence as could be unearthed. This approach seemed eminently more likely to yield useful results for our two key audiences: industry personnel and training providers.

In this way, any reader should be able to identify the main aspects of workplace life and organisation which are affected by language and literacy inclusive training. They should also be able to see the likely extent of that impact and how this fits into the overall relationship between language and literacy training and workplace improvement.

Finally, it was a basic tenet of the project that the areas of impact should be identified by the participating workplaces themselves, and not by training providers or the research team. It was of absolute importance that the report base itself essentially on what the workplace personnel said they had experienced, for this itself would lend extra weight to the validity of the findings.

Methodology

The project was undertaken by a team of five researchers across four States - New South Wales, South Australia, Victoria and Western Australia.

There were several distinct stages in the methodology of the project. These were:

1. identification of workplaces
2. interviews with key workplace personnel
3. identification of Key Performance Indicators
4. development of quantitative measuring instruments
5. administration of quantitative measuring instruments in participating workplaces
6. collation and analysis of collected data
7. writing of mini-case studies
8. writing of final report

Identification of workplaces

The initial step was to identify a range of workplaces across the four States which would reflect a reasonable cross-section of Australian industries, enterprise sizes, program types, and workforce profiles. This was a relatively straightforward task since all of the researchers involved had had extensive experience in workplace language and literacy training programs. Each researcher approached a series of workplaces in his / her own State and invited them to participate in the project. A list of 29 willing workplaces was established. Each researcher then supplied some basic background information to the Project Manager on each of them and the programs that had been run in them. These were used to gain an initial picture of each workplace, and thereby to help in the selection of the broadest possible range.

At this point, it was decided that six workplaces in each State would be the maximum that could be dealt with by the project team. A selection of workplaces was made on this basis. In this way, a good range of workplace and program types was achieved quite easily.

The list was endorsed as appropriate by the Advisory Committee and work began immediately. 23 of the 24 workplaces then officially confirmed their participation in the project. One workplace decided to withdraw but was quickly replaced by another similar workplace in the same State.

Interviews with key workplace personnel

The first stage in the process of identifying where the research should concentrate its efforts was to hold interviews with key personnel in each of the 24 participating workplaces. At a face-to-

face meeting of all the members of the research team, a great deal of discussion resulted in a list of questions which were deemed to be necessary at that initial stage. These were then organised into an *Initial Interview Questionnaire*[3]. At all points in the study, the research team was acutely aware of the need to keep its disruptive presence in the workplaces to a minimum. Indeed, it even made a commitment to this effect in writing to each workplace. For this reason, the questions in the initial interview questionnaire were kept to an essential core. Even so, the interview document was 26 pages long and took roughly 60-75 minutes to administer for each interview.

In essence, the interview covered questions in six key areas of interest to the research team:

1. Context of the program / learning
2. Implementation of the language and literacy inclusive training / learning
3. Expected outcomes
4. Unexpected outcomes
5. Evaluation of the expected outcomes
6. Lessons from the implementation experience

From the point of view of the next stage, sections 3, 4 and 5 were of critical importance. Information gathered through the other sections would later be useful in setting the context of the case studies.

Interviews were carried out in all 24 workplaces over a period of 4-6 weeks. In some workplaces, only one person was interviewed, whilst in others as many as four people were interviewed. This was because in some cases certain people had a better knowledge of certain aspects of the training program. Also, it was fairly common for one interviewee to recommend putting the same questions to another person in the workplace who might have a different perspective.

Essentially, the people interviewed were those who had the clearest understanding and fullest knowledge of the training that had occurred. In some cases this included supervisors and union representatives, but for the most part the interviewees were General Managers, HR or Personnel Managers, and Training Managers.

Identification of Key Performance Indicators

As interviews were conducted, the completed forms were collated and it gradually became clear from the responses that the clearest links that the interviewees were drawing between language and literacy training and perceived improvements in the workplace fell into the following four key areas:

- Direct Cost Savings
- Access to and Acceptability of Further Training
- Participation in Teams and Meetings
- Promotion and Job Flexibility

[3] A copy of this document may be found in the Appendices to Volume II.

Although this list seemed quite comprehensive, it was obvious from the interview questionnaires that none of the four areas pertained to all 24 workplaces. This would mean that the final report would not be able to present statistical evidence on a single issue which related to all 24 workplaces.

For this reason, and partly also in response to all interviewees mentioning improvements in the personal and interpersonal effects of the training, a further instrument was developed which was called the 'Value of the training' survey[4]. This document was designed to provide data and information which would unify the 24 workplaces in terms of their attitudes to such gains.

At this point, it became clear that the various instruments would be likely to produce findings at three different levels:

1. perceived improvements in the personal and interpersonal factors in the workplace
2. workplace statistical evidence (either from existing data or from estimates generated by this project) on the four key performance indicator areas indicated above
3. workplace-specific gains which would be best presented through the medium of the case studies

Development of quantitative measuring instruments [5]

Once the four subjects for the Key Performance Indicators had been identified, the research team collaborated on the development of a measuring instrument for each of them.

The key purpose for each was to identify workplace sources of data (preferably which already existed) which pointed to savings, gains, or other types of improvement which could be linked either directly or indirectly to the language and literacy inclusive training. For this reason, the questions focussed on eliciting data on a 'before and after the training' basis.

The instruments also sought:

- to identify ways in which the value to the workplace of any perceived changes in the data could be quantified, and

- to identify the incidence of any other contributing factors which may have influenced the figures

There were also other questions added which related to specific issues within the individual measuring instruments. The type of information they sought varied from question to question. Details are described in the introduction to each instrument in the *Statistical Overview*.

[4] Copies of the four respondent forms of this survey appear in the Appendices to Volume II.
[5] Copies of each of the instruments developed appear in the Appendices to Volume II.

The 'Value of the training' survey was developed with four respondent groups in mind: managers, supervisors, participants, and union representatives. Each group was asked to comment on perceived changes in a range of personal and interpersonal factors in the workforce including such items as worker morale, confidence to communicate, and attitude to training.

The participant respondents were also asked to indicate language and literacy skills gains they had made as a result of the training they had received, and to estimate any time savings that may have occurred as a result of their being able to carry our language and literacy tasks more quickly since the training.

Supervisors were also asked to estimate time savings based on the improved independence and speed of participants in carrying out such tasks since the training.

Appropriate questioning formats and response scales used in the 'Value of the training' survey were discussed by the Project Manager with Dr. John Fairhall, a researcher in statistical analysis who for this reason had been invited to be a member of the national Advisory Committee for the project. Similar scales and questioning techniques were then applied in the development of the measuring instruments.

Administering the quantitative measuring instruments in participating workplaces

In the majority of cases, the four measuring instruments were administered face-to-face, often starting with a return visit to the initial interviewees, before moving on to other workplace personnel including many supervisors and participants. In some cases, this proved to be impossible, and the measuring instrument was left with the workplace contact who saw that the document was completed by the relevant personnel.

Careful checking was then carried out by all researchers to clarify to whom the noted figures and estimates pertained. Where clarification could not be obtained, the statistics were removed from the study at the collation of statistics stage. This only occurred in a small minority of cases.

Relevant numbers of copies of each of The 'Value of the training' survey forms were sent to each workplace. These forms were in the main completed by face-to-face interviews with respondents, although some were administered in small group interviews organised by the researchers. In some cases, the respondents who were still in language and literacy training completed them during their training sessions.

Both through the initial interviews and the administering of the various measuring instruments, qualitative data was also being collected on each workplace. Anecdotal evidence of improvements in workers' performance were readily recorded by the researchers so that these could be used to contextualise the quantitative gains made, particularly in the case studies. Indeed, on a few occasions, it was through the relating of anecdotes that a specific saving was later identified and documented with supporting empirical evidence.

Collation and analysis of collected data

As each workplace completed the measuring instruments and the 'Value of the training' survey forms, these were collected by the researchers in each state and forwarded to the Project Manager.

'Value of the training' surveys were also sent to several workplaces in Queensland (co-ordinated by the ACTU Queensland Branch). Five of these workplaces responded. One further workplace in WA was also included.

A database was designed and set up for each of the five instruments and the data was then keyed in. This took a period of several weeks. Throughout the process, input was randomly checked for keying-in errors. The completed databases were then accessed for data queries. The analysis of the data in each of the five databases had two distinct stages.

The first stage entailed an examination of the profile of respondents to each instrument. The number of responses was analysed by respondent group, state, industry sector, industry category, individual workplace, and training program type.

The second stage centred on drawing out the data generated by the actual questions of the instruments. In general, although there were some exceptions because of gaps in the responses, database queries took the form of analysing 'before and after' ratings and calculating the percentage of respondents giving each type of rating. This was particularly the case for those questions which asked respondents to make estimates of improvements, gains, or changes that they related to the language and literacy inclusive training.

The results were tabulated and presented graphically under each question heading in what was to become the *Statistical Overview* document. Interpretive commentary was reserved for the *Findings* section of the document.

Other database analyses focussed on calculating averages of perceived improvements across individual respondent groups and the whole respondent body, as well as by program type. This latter form of data analysis was carried out in response to various requests from people interested in the report's findings to establish whether a particular program type had a greater effect than another.

One final type of database analysis was used to take a simple count of similar responses or opinions. This was generally used when the sample was too small to warrant the use of averages or percentages.

Many of the questions also asked for comments. This information was in general retrieved from the databases in the form of reports which collated into one document all the comments received in response to a particular question. These were later used in the compilation of this *Findings* document either to support, enhance or temper the researcher's interpretations made on the findings for each question. It also often happened that these comments had no statistical counterpart. In this case they were generally used to add general perceptual information to the findings of the same instrument.

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It was also possible on occasion to make a count of the types of comments made, so that these formed an extra statistical basis on which to present findings.

Once the databases had been adequately analysed for the purposes of this project[6], the statistical information which by then had formed the *Statistical Overview* document was reviewed and the key findings were presented in the *Findings* document.

References to relevant case studies were then added at appropriate points.

Finally, recommendations for action and further research were made.

Writing of mini-case studies

As soon as the collation and analysis of the data for all instruments had been completed, the case studies were begun. The principal purpose of the case studies was to highlight context-specific savings or improvements which the workplace in question related directly to the language and literacy inclusive training and which, in general, could be supported by empirical evidence.

It became obvious that not all workplaces could supply such evidence, even though their claims of improvement were quite emphatic. Since the principal purpose of the project was to measure the impact wherever possible, it was decided that case studies would focus primarily on those workplaces where empirical evidence could be established.

Each case study was planned to be only a few pages long and to focus primarily on measurable improvements. For this reason, each case study is only 6-7 pages in length, four or five of which are devoted to an evaluation of the training program's impact. The initial pages set the context of the workplace and the program. Each case study was also introduced by a page of 'details at a glance' designed to give readers an immediate overview of the workplace, its program type, and its key outcomes in terms of impact on the workplace.

Nine case studies were written in all.

Writing of final report

The final report was then collated and an executive summary presenting the recommendations was added.

The report was tabled as a draft with the Advisory Committee before final modifications were made ready for its publication and distribution.

[6] It is recognised that databases of this sort may be analysed *ad infinitum*.

Definitions

Throughout this document, several key terms are used which need to be clearly defined in order to minimise the possibility of misinterpretation. The terms are:

- Language and literacy
- Language and literacy inclusive training
- Value

Language and literacy

In this project, the terms 'language' and 'literacy' were informed by the Australian Language and Literacy Policy definitions of the same terms. The policy defines them as follows:

> ***Language*** *in its broad sense (as used in the title of the ALLP, for example) is the primary means of human communication...through the skills of speaking, listening, reading and writing. Language in terms such as 'language and literacy proficiency' is an inclusive term, covering both English and other languages.*
>
> *Language development for the individual (referring generically to the speaker's first language) is interrelated with intellectual, emotional and social development. In addition to its primary communicative functions, language also serves a wide range of cultural, artistic, intellectual, personal, group-identification, religious, economic and socio-political functions...*

The word **language** in the context of this report refers to spoken language.

> ***Literacy*** *is the ability to read and write and use written information and to write appropriately, in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth and to function effectively in our society. Literacy also includes the recognition of numbers and basic mathematical symbols within text.*
>
> *Literacy involves the integration of speaking, listening, and critical thinking within reading and writing. Effective literacy is intrinsically purposeful, flexible and dynamic and continues to develop throughout an individual's lifetime...*

The word **literacy** in the context of this report refers to written language.

Just as people use a number of variations of spoken language depending on social contexts in which they are participating, so too do people develop multiple literacies. Within this study, the terms 'language' and 'literacy' are primarily concerned with the varieties of spoken and written language used within workplace contexts.

Language and literacy inclusive training

In order to speak about the various types of language and literacy training programs that have occurred in the 24 participating workplaces in this study, it was necessary to find an 'umbrella' term which adequately covered all contingencies.

> ***Language and literacy inclusive training*** *refers to any workplace-based and / or work-related training where language and literacy skills were recognised and addressed as a part of the training process. This includes training where these skills were the sole or primary focus of the training, where they were identified and addressed in association with other workplace needs, training, or goals, or where they were systematically integrated into all other workplace training.*

For ease of reference, the program types referred to in the study are listed below.

A1 - Stand-alone ESL, literacy and / or numeracy course
A2 - Stand-alone general workplace ESL, literacy and / or numeracy course
B1 - Discrete program linked to industry competency standards
B2 - Discrete program integrated with industry certificate
B3 - Discrete program integrated with specific workplace agenda
B4 - Discrete program integrated with other workplace training program
B5 - Combination of B1 - B4 above
C - Language and literacy skills consistently integrated into all mainstream training

Table 1: Program Types

In general,

1. A-type programs focus solely or primarily on language and literacy skills, and may or may not have a general work-related slant.

2. B-type programs are discrete programs with a special focus on the language and literacy skills required for a specific workplace need, training, or goal. The balance of language and literacy skills and workplace-specific content is roughly equal.

3. C-type programs occur when all mainstream workplace training includes the recognition and addressing of relevant language and literacy skills. They are normally programs which have evolved from early B-type, and in some cases A-type, programs.

Value

Because of the wide range of industries and workplaces covered in this study, the term 'value' necessarily requires a broader rather than a narrower definition. For this reason, the definition given here is followed by several points which the reader should bear in mind when considering this term in context.

> ***Value** is a concept which ranges along a continuum between the quantitatively measurable at one end and the qualitatively describable at the other. In the specific context of the workplace, value is a quality which is attached to anything which, either directly or indirectly, provides, enables or facilitates an improvement in productivity, efficiency or safety within the workplace. This may or may not be objectively or quantitatively measurable.*

Depending on the workplace and industry, 'value' may be of more relative importance at one end of the continuum than at the other.

People-centred, service industries tend to place greater emphasis on improvements which are towards the qualitative end of the continuum. The less tangible issues such as quality of service and quality of human interactions are the key outcomes towards which many such workplaces are working.

Product-centred, manufacturing industries tend to place greater emphasis on improvements which are towards the quantitative end of the continuum. The more tangible issues such as the number and quality of items produced, orders processed and all at the lowest possible cost are the key outcomes towards which these workplaces are working.

Nevertheless, there are significant areas of overlap, and no one industry or workplace type can afford to focus on purely one end or part of the value continuum if it is to achieve its highest possible outcomes.

Acronyms

The following acronyms are used throughout this study

CBT	Competency-based training
ESB	English speaking background
ESL	English as a second language
NESB	Non-English speaking background
OH&S	Occupational Health and Safety
QA	Quality Assurance
RPL	Recognition of Prior Learning

Introduction to the findings

The findings presented in this section of the document are organised under five key headings which correspond to the five research instruments developed.

- Direct cost savings
- Access to and acceptability of further training
- Participation in teams and meetings
- Promotion and Job Flexibility
- 'Value of the training' survey

Table 2 indicates the number of individuals and participating workplaces involved in responding to each of the instruments used in the study.

Instrument	Number of respondents	Number of workplaces	Percentage of 24 principal workplaces
'Value of the training' survey	400	31	100%
Direct cost savings	53	16	66%
Access to and acceptability of further training	16	8	33%
Participation in teams and meetings	18	8	33%
Promotion and job flexibility	33	8	33%
TOTAL	**520**		

Table 2: Number of respondents and workplaces for each instrument used in the study

Each section is divided into three parts: 1) a summary of the findings, 2) an outline of the instrument used, and 3) the detailed findings. Cross-references to relevant case studies are made at appropriate points.

Before proceeding to the five sections of findings, however, there follows a brief outline of some general findings of the project.

The relationship between language and literacy training and economic competitiveness

Through the process of interviewing key senior and frontline management personnel in the 24 participating companies, it became clear that, for them, the term "valuable to the workplace" had a much more broadly based definition than simply "anything which can be shown to be having a positive and quantifiable impact on the workplace". Depending on the interviewee's particular role in the workplace, and also partly on the extent to which the workplace had already moved along the workplace reform path, what was "valuable to the workplace" was variously perceived to be anything which, regardless of its measurability, improved:

- productivity and international competitiveness,
- the rate at which workplace change occurred, and / or
- the success of workplace training.

In an attempt to determine the relationship between these varying perceptions and workplace training, a structure consisting of three broad levels materialised. From the top down, these are:

Level 1. **Higher competitiveness**. In both the shorter and the longer-term, workplaces have their eye on the bottom line - reducing costs and increasing quality, productivity and service. This includes reducing wastage, reducing costs on materials, reducing labour costs, and in general eliminating anything which diminishes rather than enhances productivity. This also logically entails increasing efficiency and safety wherever possible.

Level 1. **Workplace change**. All of the workplaces involved in the study have recognised that to bring about this higher productivity, they need to use a number of strategies. These fall into the following key areas:

- Implementation of Quality standards and systems
- Introduction of a workteam structure
- Introduction of new technology
- Facilitation of multi-skilling and job flexibility
- Implementation of safety training and procedures

Insofar as they underpin and move the workplace closer to the goals in Level 1 of the structure, these things all have an intrinsic value to the workplace.

Level 1. **Workplace Training.** The application of the strategies identified at Level 2 may be seen as the key purpose behind workplace training. Insofar as training underpins and facilitates the implementation of workplace change, that training is perceived to have an intrinsic value to the workplace.

From an analysis of the findings of this report and from a synthesis of the ideas expressed in the case studies and interviews concerning the value of language and literacy inclusive training, it seems reasonable to posit two further levels of value underpinning the first three. This five-tiered structure is represented in Figure 1.

From the figure, it may be seen that higher productivity and competitiveness (including better service in some industries) will be affected by success at each level. If the issues in the bottom level of the structure are not addressed or present, then workers will not be able to successfully access training. In turn, this will mean less than satisfactory outcomes of further training, if the latter is taken on at all by the worker concerned. The workplace training which is designed to improve that worker's contribution in terms of the systems, standards, technology and job flexibility deemed necessary to improve productivity is underpinned - or undermined - by the question of access.

Where basic language and literacy skills already exist, access to training on this score at least is ensured. However, if the training requires specific language and literacy skills (report writing, oral presentations, ability to co-ordinate and lead a team) then lack of familiarity with these higher order language and literacy skills becomes a barrier to successful completion of the training if trainees do not have them. Therefore, training which provides integrated support and coaching in these skills at the same time is likely to be more successful because of this.

Where workplace training requires the trainee to undertake a language and literacy skills-based function in the workplace as a result of the training, the program fails the trainee if it does not ensure that the trainee is equipped to take on that task.

It may be seen therefore that, at each level of the structure, language and literacy skills are a contributing factor to success. It follows therefore that language and literacy inclusive training and support are also a factor contributing to success.

The relationship between language and literacy training and economic competitiveness

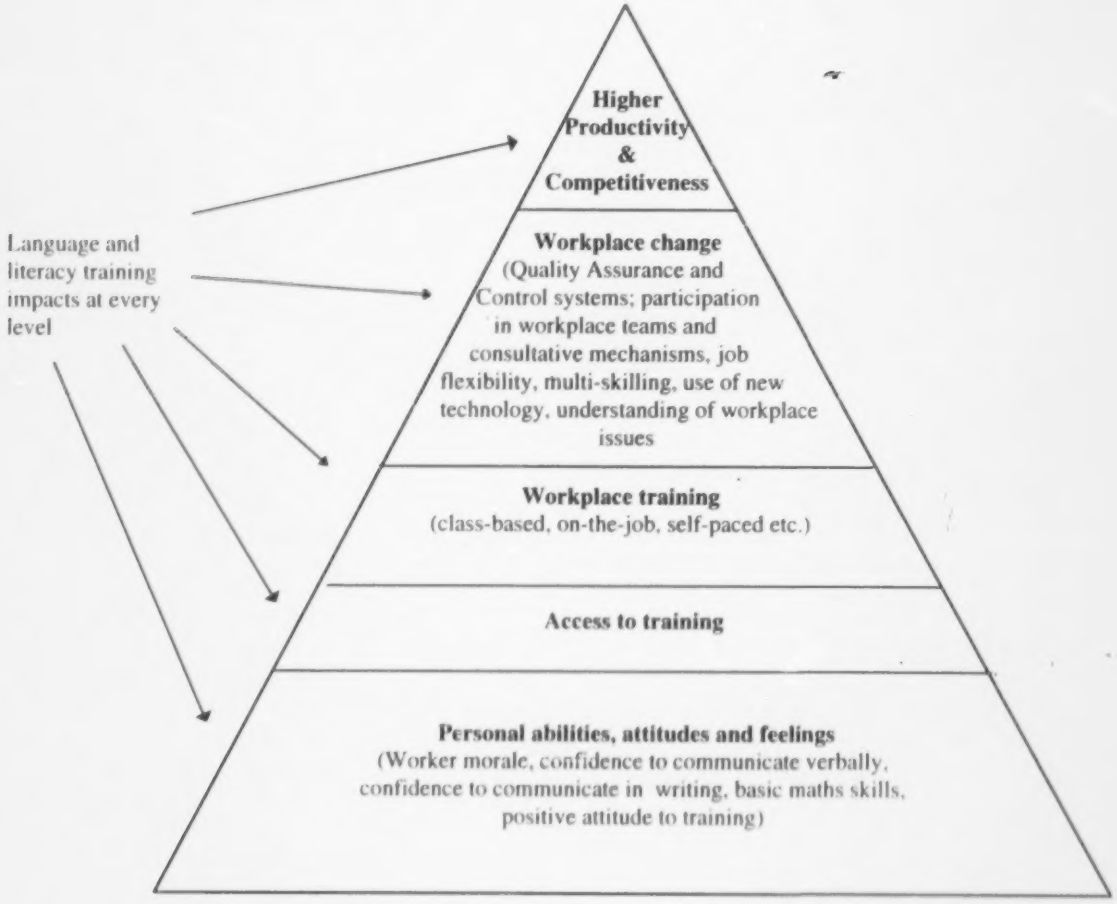
Higher Productivity & Competitiveness
Language and literacy training impacts at every level
Workplace change
(Quality Assurance and Control systems; participation in workplace teams and consultative mechanisms, job flexibility, multi-skilling, use of new technology, understanding of workplace issues
Workplace training
(class-based, on-the-job, self-paced etc.)
Access to training
Personal abilities, attitudes and feelings
(Worker morale, confidence to communicate verbally, confidence to communicate in writing, basic maths skills, positive attitude to training)

Figure 1: The relationship between language and literacy inclusive training and economic competitiveness

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Quantitative and qualitative measurement

Closely allied, of course, to the concept of what is 'valuable to the workplace', is the question of measuring that value. The task facing the research team was to measure the impact of language and literacy training on workplaces, and wherever possible to do this quantitatively. This said, it was important first to establish the extent to which quantitative measurement was possible and even desirable.

Several of the workplaces commented that it is always useful to measure training outcomes in order to justify continuing to spend money on them. But an equal if not greater number also commented that quantitative measurement was an expensive, time-consuming exercise. In consequence, few had actually carried it out for any type of workplace training.

The time-consuming aspect of such measurement appears to be based on the well-founded assumption that it is a very difficult thing to do. Apart from the logistics of the exercise, the impact in the workplace of any sort of training was seen in general to be too intertwined with a constellation of other workplace variables for it to be considered practicable. In other words, the 'impact of training' variable could not reliably be measured in isolation from the influences of others.

This is indeed what has led trainers in the past to focus their evaluation of training outcomes on what trainees can do in the relatively controllable context of the training environment. When evaluation *has* gone 'beyond the training room', the usual measure has been to seek qualitative feedback from supervisors and other personnel on whether the training has been effective or not. In most cases, therefore, the continuation of work-related training programs is supported on the basis of perceived as opposed to empirically measured improvements.

A value measurement continuum

Figure 2 is intended to further elucidate this point. It places on an ungraded measurement continuum each of the areas investigated in this research project. These were the areas which respondents considered had been positively affected by language and literacy inclusive training and were of intrinsic value to the attainment of workplace goals. The diagram highlights that the ease with which they may be empirically measured varies according to the nature of each one.

In general, the measurement that was carried out in the study reflects this continuum. The closer to the quantitative end of the continuum, the more readily measurement of gains became possible. In order to gain a quantitative evaluation for those areas which are toward the qualitative end of the continuum, gains were measured by the frequency with which comments occurred or observations were made.

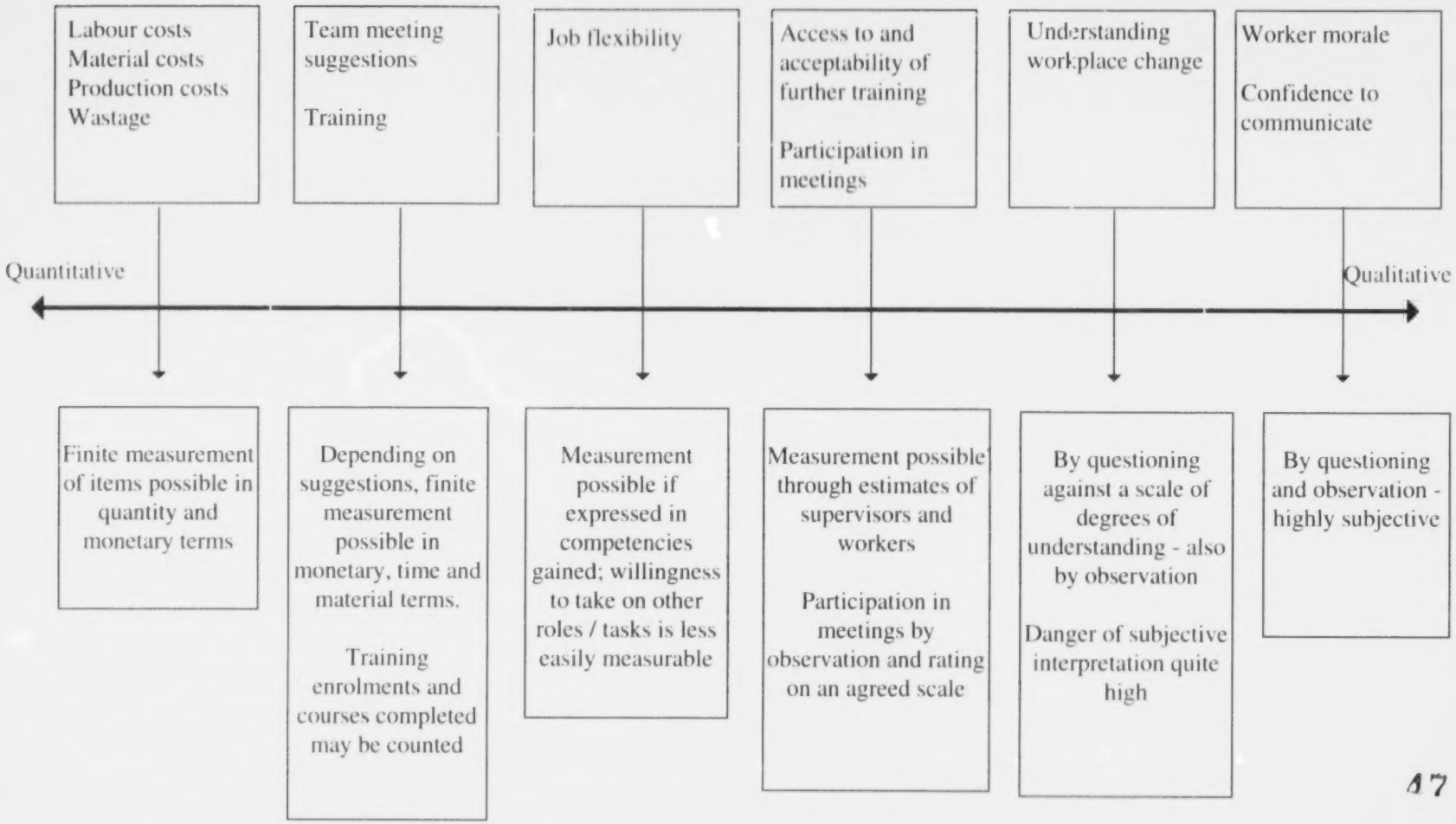
Labour costs
Material costs
Production costs
Wastage
Team meeting suggestions
Training
Job flexibility
Access to and acceptability of further training
Participation in meetings
Understanding workplace change
Worker morale
Confidence to communicate
Quantitative
Qualitative
Finite measurement of items possible in quantity and monetary terms
Depending on suggestions, finite measurement possible in monetary, time and material terms.
Training enrolments and courses completed may be counted
Measurement possible if expressed in competencies gained; willingness to take on other roles / tasks is less easily measurable
Measurement possible through estimates of supervisors and workers
Participation in meetings by observation and rating on an agreed scale
By questioning against a scale of degrees of understanding - also by observation
Danger of subjective interpretation quite high
By questioning and observation - highly subjective

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Figure 2: A value measurement continuum

The measuring instruments

The various measuring instruments developed have in general been successful in achieving their purpose with perhaps one notable exception. In each case, except for the 'Value of the training' survey, which centred on perceptions, requests for statistical evidence were made. More often than not, however, these requests were fruitless. This was not because the instruments were making unreasonable demands on the participating workplaces, but rather because there was a dearth of relevant and available statistics already in existence. Where statistics *were* forthcoming, these were normally so rare that they could not be construed to apply to all workplaces. They therefore became the focus of a case study.

The most commonly and fully completed sections of the instruments concerned the 'before and after' perceptions of improvements or gains based on the respondents' own observations. These form much of the backbone of the findings of the project. Questions which asked for qualitative comment also drew responses in large numbers, such that much of what was estimated in other questions could be enhanced with quotations.

Validity for future use

In some cases, certain parts of the instruments were deemed inappropriate or irrelevant by particular workplaces or respondents. By and large, however, they proved to be effective tools for gathering the information and knowledge for which they were designed.

For future use, however, certain modifications would be recommended in the light of experience. In certain questions, the type of response could usefully be more directed so as to gain more standardised and therefore more easily comparable responses. For instance, in the *Direct Cost Savings* instrument, the example given for the 'amount saved' could be improved to read 'x hours / dollars per week per participant' so as to avoid the need for follow-up questioning to determine the exact meaning of estimates.

Another recommendation for modification would be to eliminate all questions asking for a breakdown of statistics by gender or background. These questions almost universally were left blank because none of the workplaces organised their information along such lines.

An omission which should perhaps be included in any revised version of the instruments was that nowhere was account taken of the period of time over which estimated improvements occurred. Although in this instance the respondents were in general answering for periods of training spanning no more than two years, this was achieved by cross-referencing with other data about the workplace which was quite a time-consuming process.

Finally, as most of the instruments were administered after training programs had been completed, most of the results presented were of perceptions gained with hindsight. Any future application of the instruments should consider their administration at least twice - once before training commenced and again on completion. This is likely to achieve a more objective result than was possible through this project. A third application after a period of six months might also yield interesting results about the duration of training effects.

In sum

Taking this project and its findings as a whole, it is quite clearly demonstrated that language and literacy inclusive training has a valuable impact on the workplace in which it is run. The statistics generated from company records, comments, estimates, and perceptions show quite unequivocally that language and literacy training participants gain in confidence to take on further training, to participate in meetings and to take on other workplace tasks that require reading, writing and verbal skills. Comments from all workplace parties - managers, supervisors, participants, and union representatives - also emphatically support the view that such training enhances their workplace's ability to implement workplace change.

This research project has also established direct links between language and literacy inclusive training and considerable savings in terms of downtime, increased productivity, reduced labour costs, reduced wastage, improved levels of government funding, and saved jobs. These are all clearly documented and supported with evidence in the following pages and in the case studies.

The body of evidence contained within this report should leave no one in any doubt that the impact of language and literacy in the Australian workplace is both positive and considerable. As one manager expressed it,

"Without the language and literacy training, we couldn't possibly be where we are today."

Direct cost savings

'Our downtime on the drums has dropped by nearly 50% since the program started [in April 1995], and 60% of that can be directly attributed to the language and literacy training given to the fleshing team.'

Geoff Towns
Company Secretary
Victorian Hide and Skin Producers Pty Ltd

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Summary

Perceptions of saving

It is quite clear from the results of this measuring instrument that the majority of respondents considered that their workplace had made perceptible cost savings which they linked directly to the language and literacy inclusive training in their workplace. Further, the degree of saving was perceived to be higher by those who rated the skills as "Not good" before the training. This is perhaps not surprising since these people, logically, would have been from workplaces where there was a greater need for training and greater room for improvement. Improvements, therefore, would also be more readily noticeable than in a workplace where skills levels were already considered satisfactory.

Despite this apparently uniform response to each skill, there are quite marked differences between the two respondent groups. From the figures in Table 3, it is quite apparent that direct cost savings were perceived by a consistently higher number of managers than supervisors. With the exception of two skills ('writing short messages' and 'writing minutes of meetings') there is a difference of 20 - 30 percentage points between the two respondent groups of those who perceived savings to have occurred. If we compare the results here with those of the 'Value of the training' survey, we can discern a trend indicating different experiences and / or perspectives of these two groups. On this point, there are several interpretations that seem fair to suggest.

1. Managers generally may be taken to have a broader, more holistic view of a workplace than most supervisors, especially in larger enterprises. It follows that their definition of savings or benefit or value would include a depth and breadth of meaning which supervisors, from their narrower perspective, may not have. That is, managers are more likely to count as savings the less tangible ramifications of positive outcomes of training, whilst supervisors may be focussing more on the obvious time savings that impact on their own sphere of influence.

2. Supervisors may only be considering those training participants who work in their particular section of the workplace. Where little improvement in those workers is noticed - and that alone could be due to restricted opportunities to use the learned skills once back at work - a negative rating may occur. On the other hand, a manager taking the whole training group into account, may perceive the savings across the workplace.

3. Supervisors are closer than managers to the reality of the day-to-day operation of a workplace. They perceive that there has been little actual change in workers in the way they use their language and literacy skills on the job. Managers may be too far removed from the daily situation and take the few positive comments they hear as representing the broad view.

4. Supervisors who have not been included in the development and focus of the training are likely to be less enthused by the training program than those who have had direct input into it. Those who have been able to cite specific skills needing attention which are then addressed in the classes are more likely to be looking out for and noticing the changes than are those supervisors who have no real idea of what his / her workers are studying. When such gains occur, those supervisors who are involved are also more likely to associate the gain with the training program.

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Workplace language and literacy skill	Managers	Supervisors	Both Groups
understanding written work / job orders	86%	64%	74%
understanding written messages	90%	60%	74%
understanding written instructions	95%	68%	80%
reading plans	75%	50%	61%
completing workplace documents generally	91%	66%	77%
reporting problems in writing	74%	66%	70%
completing QC documentation	78%	47%	61%
writing short messages	60%	59%	59%
writing minutes of meetings	58%	47%	52%
understanding verbal instructions	81%	58%	68%
clear communication with team / crew members	89%	66%	76%
using a calculator	-	-	56%
calculating quantities accurately	-	-	66%
calculating volumes of materials	-	-	67%
completing tally sheets	-	-	89%
completing time sheets	-	-	71%
completing maintenance sheets	-	-	83%
AVERAGE (ALL SKILLS)	80%	59%	70%

Table 3: Percentages of respondents who had perceived direct cost savings

Nature of the savings

Turning our attention now to the skills themselves, there were a great many comments made across the different skills as to the nature of the savings. Grouping these categories together, and ordering them in terms of frequency of occurrence over the 17 skills, the list looks like this:

Nature of saving	No. of skills for which this comment was made
less supervisor time required	12
increased accuracy and fuller completion	10
assistance no longer required	8
improved understanding and responsiveness	5
less rework	5
less time spent	5
decreased machinery downtime	4
fewer mistakes	4
improved clarity and conciseness	2
improved morale	2
improved Quality focus	2
interpreters no longer required	2
less wastage	2
greater assertiveness	1
greater team involvement	1
improved identification of problems	1
improved operation of committees	1
improved standard of delivery of service	1
increased interaction	1
reduced delays	1
reduced re-writing of documents	1
transfer of skills to other situations	1

What the above list highlights is the broad array of types of saving that improvements in workers' language and literacy skills have the potential to bring about in any workplace.

Perhaps of most significance is that 'less supervisor time required' and 'assistance no longer required' - two very significant time-based savings - appear very high up the list. In fact, there are eight time-based types of savings in the list, which indicates quite strongly that improvement in any of the skills surveyed will automatically be a time-saving gain for the workplace.

The other types of savings that were cited should also not go unnoticed. They include: improved quality (5 occurrences), improved understanding (2 occurrences), improved operations (4 occurrences) and improved communication (3 occurrences).

Amount of savings

Several of the case studies show conclusively that significant direct cost savings occur as a result of implementing language and literacy inclusive training.

- Civil & Civic / Lend Lease Interiors, NSW
  - $4.75 million (cost / benefit analysis)
  - $60,000 in recovered crane costs at one construction site
  - $64,500 (estimated) saved in 'unproductive' labour costs
  - $10,000 (estimated) in recovered forklift costs at one construction site
- Johnson and Johnson Medical, NSW
  - 10 jobs saved
  - $250,000 (estimated) saved in avoided redundancy payments
  - $40,000 per annum saved in salaries
- Victorian Hide and Skin Producers, VIC
  - $82,080 per annum saved in reduced downtime
  - $10,670 per annum saved in reduced maintenance costs
- Visy Board (WA) Pty Ltd, WA
  - 2% increase in productivity on one machine
- St. John of Kronstadt, VIC
  - $50,000 - $60,000 per annum increase in government funding
- Goodman Fielder Milling, NSW
  - $21,700 (estimated) per annum in 'unproductive' labour costs
  - $4,660 per annum reduction in flour giveaway
- Haigh's Pty Ltd, SA
  - $4,900 per annum reduction in 'unproductive' labour costs

The variety of gains mentioned above, although impressive, underscores at the same time how difficult it is to predict, for any given program-type or industry, precisely what the amount of savings will be. The principal variables appear to be:

- the purpose of the workplace in running the training
- the number of trainees involved in the training and what proportion of the whole workforce this represents ;

- the degree to which each of the trainees is required to exercise the particular language and literacy skill on the job

- the frequency with which trainees are expected to exercise the language and literacy skill on the job

- the degree of commitment by management and supervisors to the training (e.g. ensuring release of workers to attend; giving time to monitor and comment on progress)

Other cost variables

Other variable costs would include: the cost of the training itself, casual labour costs, and overtime paid due to the training. Similarly, variables on the savings side of the equation are also hard to establish, such as the amount of labour costs (both of supervisors and other workers) which are no longer expended in helping workers who previously could not perform the workplace language and literacy skills without assistance.

Since these variables are also likely to vary widely from workplace to workplace, and even within a workplace, it is impossible to establish accurately a monetary benefit figure that would apply to all workplaces running language and literacy training. To achieve this, a separate, in-depth cost-benefit analysis would need to occur in each of a whole range of workplaces.

However, for the 16 workplaces responding to the *Direct Cost Savings* instrument, it was possible to establish an estimated monetary benefit for weekly labour cost savings per language and literacy participant with regard to each of the skills surveyed. These are presented in Table 4, and are based on an average $12.70 hourly pay rate (calculated across all participating workplaces).

The figures in Table 4 were calculated in the following way. Where respondents gave both a time-saving and a pay rate which differed from the average pay rate, the time period was adjusted to reflect the $12.70 rate. Where a cost saving was estimated but no time period was given, the figure stated was divided by the $12.70 hourly rate to identify a time saving.

With all the savings converted to 'time saved', an average and a median time-saving for each skill was calculated. The cost saving figures were then established by multiplying these by the average hourly pay rate of $12.70.

Despite the greatest care taken in producing these figures, caution needs to be exercised in interpreting them. For example, they do not take into account the cost variables listed above. Nor do they necessarily include the savings in terms of supervisory or other workers' time which occur as a result of a training participant's improvement. What the figures do represent is an estimated saving in participant labour costs noted by the workplace respondents.

It should also be pointed out that several workplaces identified specific savings in terms of costs other than labour. These are presented in the individual case studies and do not feature in Table 4.

Workplace language and literacy skill	Average of estimated labour cost savings per trainee per week	Median of estimated labour cost savings per trainee per week
understanding written work / job orders	$29	$22
understanding written messages	$40	$16
understanding written instructions	$77	$16
completing workplace documents generally	$36	$25
writing minutes of meetings	$9	$8
understanding verbal instructions	$32	$16
clear communication with team / crew members	$34	$25
calculating quantities accurately	$44	$21
calculating volumes of materials	$44	$28
completing time sheets	$19	$16

Table 4: Averages and medians of estimated labour cost savings for each skill surveyed[7]

Despite theses heavy provisos, it is nevertheless possible to interpret from the figures in Table 4 that labour cost savings do accrue from workplace language and literacy training. It is also possible to say that, with the exception of "writing minutes in meetings", the average estimated labour cost savings ranged between $19 and $77 per participant per week for each skill. The median ranges were between $16 and $28 per participant per week for each skill. That however is as much as one should interpret from these figures.

'No savings' ratings

Amongst the responses to this measuring instrument, there was a relatively high incidence of "No savings" ratings for most of the language and literacy skills surveyed. What is noticeable in particular here is that in almost all cases, these ratings were given overwhelmingly by supervisors. As noted earlier, perhaps this is due to the perspective of the supervisor being, in general, more limited than that of the manager. Perhaps, too, it is related to the perception of the average supervisor that a saving that does not influence his/her particular section of the

[7] Skills where there were less than five estimates have not been included in the table.

workplace is difficult to judge and that therefore the safer option is to indicate 'no savings'. Whatever the reason, such high response rates in this area indicate that a closer examination of the role of perspectives in estimating the value of language and literacy training should be entertained by workplaces and training providers alike.

In sum

The vast array of types of savings and range of amounts of saving emphasises the different experience each workplace in the study has had with its own language and literacy inclusive training. In the one workplace, the saving is apparently minimal; in the next, it is enormous. In one, general savings are made, in another a specific one-off saving. In one, the saving is time-based; in another jobs are saved, and in still another salary and / or material costs are removed. In some, time is reduced; in others the time spent on documentation is increased, but this is off-set by greater accuracy or fuller completion of the task. In some, the savings are obvious and quantifiable and supported by statistics; in others, the savings are perceptible but intangible and, if believed, have to be taken on faith.

It has also been possible to estimate a range of labour cost savings to the 16 workplaces in this part of the study. However, to be more precise than this would be to move too dangerously into the realm of supposition.

The many comments which respondents made on the measuring instrument forms also underline that such quantitative measurements alone are in fact not an adequate enough measure. For each skill applied in the course of a person's work, there are other gains which benefit everyone - gains in terms of better organisation, a clearer sense of direction and purpose, a sense of momentum and dynamism replacing a sense of inertia, and an increase in morale which is vital to a healthy, productive and efficient workplace. These things are so nebulous that they can all too easily get brushed aside or overlooked. Yet their ramifications have much more impact on the daily life and organisation of a workplace than a simple measure of time or money saved could ever hope to describe.

About the instrument [8]

The *Direct cost savings* instrument was designed in response to the information the research team identified through its initial interviews with key personnel in the 24 participating workplaces. Those interviews highlighted various areas of specific cost savings which interviewees claimed had occurred as a result of the language and literacy inclusive training program.

The questions raised by the instrument therefore reflect the issues which the initial interviews had indicated were relevant. Once the measuring instrument was developed, 53 respondents in 16 of the 24 workplaces completed it. The respondents were either in management or supervisory positions. There were 24 managers and 29 supervisors [9].

The measuring instrument was designed to elicit information relating to cost savings in the workplace which the respondent linked to the outcomes of the language and literacy inclusive training program. First, respondents were asked to rate the degree of savings they had perceived in a range of workplace language and literacy skills. The five-point rating scale offered '*great savings*' , '*some savings*', '*minor savings*', '*no savings*' and '*losses*' as possible responses.

They were then asked to comment on the nature of any savings they had so identified and, where possible, to indicate the amount of saving. These two questions were reasonably consistently answered by the respondents. However, a third question, asking whether official workplace statistics existed which might support their answers to the earlier questions regularly drew a blank. This is perhaps not entirely surprising since the workplaces were asked to comment on no fewer than 17 areas of direct cost saving. The statistics which were available feature in the relevant case studies and are cross-referenced at the appropriate points in this section.

The findings presented here therefore are principally aggregated estimates of perceived savings across 16 workplaces. Percentage figures for the different respondent perceptions are presented for each of the surveyed skills and attention is also given to that group of respondents who, for each skill, gave a pre-training rating of "Not good". Where appropriate, indications of the type and amount of savings have also been included.

Finally, findings with regard to the different program types are also given.

[8] A copy of the *Direct Cost Savings* instrument appears in the Appendices to Volume II. For a more detailed description of the instrument, see the introductory notes to the results in the relevant section of the *Statistical Overview*.

[9] For breakdowns of the 53 responses by other aspects, refer to the *Statistical Overview*.

Workplace skills

Understanding written work / job orders

86% of managers and 64% of supervisors considered that there had been savings linked to workers' understanding of written work or job orders as a result of the language and literacy training in their workplace. Of these respondents, roughly 50% of both groups considered the savings as more than 'minor'. This figure was 60% of all respondents who had rated this skill as "Not good" before the training.

11 of the workplaces indicated the nature of the savings they had experienced. These fell into three key areas. Namely, that workers now :

1. spent less time in reading and responding to job orders
2. could read the job orders without assistance
3. made fewer mistakes requiring rework or remedial action

Estimated savings in different workplaces varied markedly, ranging from a few minutes each day to $40,000 per annum in one workplace. The more significant statistics are presented in the associated case studies (see below).

Of the 46 respondents here, 26% indicated that they had perceived no savings related to this skill. Of these, three-quarters were supervisors.

☞ *Case study No. 1: Johnson & Johnson Medical*
☞ *Case study No. 4: Visy Board (WA) Pty Ltd*

Understanding written messages

90% of managers and 60% of supervisors considered that there had been savings due to improvements in this skill amongst workers since the training. Of these, 52% of the management group felt that the savings had been more than 'minor', while only a third of supervisors considered this to be the case. For those who had rated this skill as "Not good" before the training, the combined figure was 85%, 45% considering the savings more than 'minor'.

9 of the workplaces indicated the nature of the savings they had experienced. They fell into the same three key areas as for the previous skill.

Estimated savings in different workplaces varied , ranging from five minutes a day to $60 per week.

Of the whole respondent group, 26% felt that there had been no savings made in this area. Supervisors outweighed managers by five to one in this opinion.

Understanding written instructions

Of the 45 respondents here, 95% of managers and 68% of supervisors considered that savings had occurred in relation to this skill. 37% of the combined respondent groups deemed the savings to be better than 'minor'. For those who had rated this skill as "Not good" before the training, this figure rose to 50%.

9 of the workplaces indicated the nature of the savings they had experienced. They fell into the following key areas:

1. improved understanding and responsiveness
2. decreased downtime of machinery
3. less supervision required
4. use of interpreters no longer required
5. fewer mistakes being made

Estimated savings across the different workplaces varied , ranging from $40 to $250 a week.

20%, the majority being supervisors, considered that no savings had been made in this area.

Reading plans

As far as the workplace skill of reading plans was concerned, 75% of managers and 50% of supervisors considered that savings had occurred. Those rating the savings as better than 'minor' were 53% of managers and 25% of supervisors (a combined respondent group figure of 40%). For those who had rated this skill as "Not good" before the training, this combined figure was 60%.

8 of the workplaces gave an indication of the nature of the savings they had experienced. These fell into the following key areas:

1. improved understanding and responsiveness
2. reduction in rework
3. assistance no longer required
4. improved standard of delivery of service

Only two respondents out of a total of 35 gave an estimate of the savings they had made, but these were negligible.

37% of the combined respondent groups considered that no savings had been made in this area.

Completing workplace documents generally

All but two of the 53 respondents answered on this issue. 91% of the managers and 66% of the supervisors considered that savings had occurred. Those rating the savings as better than 'minor'

were 64% of managers and 38% of supervisors (a combined respondent group figure of just under 50%). For those who had rated this skill as "Not good" before the training, this combined figure was 58%.

Four of the respondents, that is 8%, considered that the savings related to improvements in this skill had been 'great'. The four respondents came from four different workplaces.

Respondents in 12 of the workplaces gave an indication of the nature of the savings they had experienced. This number of responses is in itself an indication of the significance of this particular skill in the area of workplace savings resulting from language and literacy training.

The types of saving may be categorised as follows:

1. improved understanding leading to more accurate and fuller completion
2. more useful and readable reporting
3. assistance no longer required
4. reduction in time spent re-writing documents

The amounts of reported saving ranged enormously from an hour a day to 65 hours per week. In terms of dollars, the savings also ranged widely, from the lowest at $2.12 per day to $10,000 on a single construction job - *(Case study No.5 Civil and Civic / Lend Lease Learning)*

Against the many claims of savings from these 12 workplaces, 23% of the 51 respondents felt that no savings had been made in this area. Five out of six of these were supervisors.

☞ *Case study No. 1: Johnson & Johnson Medical*

☞ *Case study No. 2: St John of Kronstadt*

Reporting problems in writing

74% of managers and 66% of supervisors considered that there had been savings linked to workers' reporting problems in writing as a result of the language and literacy training in their workplace. Of these, roughly 57% of managers and 29% of supervisors (a combined figure of 42%) considered the savings as more than 'minor'. This figure was marginally higher at 46% for those who had rated this skill as "Not good" before the training.

Nine workplaces indicated the nature of the savings they had experienced. They fell into three key areas:

1. some workers could write reports more quickly
2. some workers could write reports without assistance
3. downtime had been reduced

Estimated savings by the different workplaces varied markedly, ranging from a few minutes each day to 30 hours per week.

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30% of all respondents indicated that they had perceived no savings related to this skill. Of these, three-quarters were supervisors.

Completing Quality Control documentation

From a base of only 37 respondents on this issue, 78% of managers and 47% of supervisors stated that they had perceived cost savings in the area of workers' completing QC documentation as a result of the language and literacy inclusive training run in their workplace. Of these, half of the managers considered that the savings had been more than 'minor', whereas only a quarter of the supervisors felt this. The combined figure here was therefore 39%. This figure remained unchanged for those who had rated this skill as 'Not good' before the training.

Only 5 workplaces registered comments under "Nature of the Savings". The key areas of saving were:

1. Improvement in Quality focus
2. Less or no supervision required
3. Less rework
4. Data collection forms now being completed

Estimated savings ranged from 5 - 15 minutes per day.

14 respondents (38% of the whole group) considered there had been no savings related to the area of QC documentation completion. Of these, supervisors outnumbered managers by five to two.

☞ *Case study No. 1: Johnson & Johnson Medical*

Writing short messages

As far as the workplace skill of writing short messages was concerned, 60% of managers and 59% of supervisors considered that savings had occurred. Those rating the savings as better than 'minor' were 45% of managers and 23% of supervisors (a combined respondent group figure of 33.3%). For those who had rated this skill as "Not good" before the training, this combined figure was 43%.

9 of the 16 workplaces gave an indication of the nature of the savings they had experienced. These fell into the following key areas:

1. improved clarity and conciseness (leading to less confusion and time-wastage)
2. less supervision time required in following up
3. assistance no longer required
4. reduction in delays

Despite the number of responses given on the nature of savings (12 in all), only four respondents were able to give estimates of the amount of savings they had made. These ranged from 5 - 15 minutes per day. In one workplace, an estimate of $50 per week was noted.

An enormous 40% of the combined respondent groups considered that no savings had been made in this area.

Writing minutes of meetings

Only 36 people responded to this question, of whom 19 were managers and 17 were supervisors. 58% of the managers and 47% of the supervisors considered that savings had occurred in the area of minute-writing skills in meetings. A combined figure of 27% felt that the savings had been better than 'minor'. For those who had rated this skill as "Not good" before the training, this combined figure was 33%.

Respondents from seven of the workplaces gave an indication of the nature of the savings they had experienced. These fell into the following key areas:

1. improved operation of committees
2. improved clarity, accuracy and conciseness of minutes
3. improved morale
4. less supervision time required in following-up
5. clerical officers no longer required to do this job
6. application of procedure in other workplace meetings

Estimates of tangible, measurable gains in terms of time and money were quite minimal, ranging between $1 and $10 per week.

47% of the combined respondent groups considered that no savings had been made in this area. This dramatically high percentage requires some thoughtful interpretation. This project, and in particular this measuring instrument, has constantly encouraged respondents to think in terms of figures and things measurable. Given that the gains in improved minute-taking in meetings are likely to be minimal (in terms of the actual physical time taken and number of persons completing them) it is perhaps not surprising that so many respondents considered there had been no savings - or perhaps that should be rephrased to 'no readily quantifiable savings'. This interpretation might also be readily used in regard to the lower number of respondents to this, and similar issues surveyed.

Understanding verbal instructions

81% of managers and 58% of supervisors considered that there had been savings in the area of workers understanding verbal instructions since the language and literacy inclusive training in their workplace. Of these, 66% of both groups considered that the savings had been better than 'minor'. (Three managers rated the gains as 'great'. They came from three different workplaces). Very few (only 10) respondents rated their workplace's performance on this issue as "Not good" before the training. For this reason percentages are not offered on this issue.

Respondents from nine of the workplaces gave an indication of the nature of the savings they had experienced in regard to workers understanding verbal instructions. These fell into the following key areas:

1. workers understanding and responding better
2. workers responding promptly
3. less supervision time required in following up
4. fewer mistakes
5. reduction in workers' need to seek clarification
6. less repetition of messages / instructions required
7. interpreter no longer required

The average estimated savings was $32 with $16 per week being the median.

15 respondents (32% of the whole group) considered there had been no savings related to the area of QC documentation completion. Of these, supervisors outnumbered managers by almost three to one.

Communicating clearly with other team / crew members

89% of managers and 66% of supervisors considered that their workplace had experienced savings in this area as a result of the language and literacy inclusive training. Of these, 59% of the managers and 61% of the supervisors considered that these savings had been better than 'minor'. Three supervisors and one manager considered that the savings had been 'great'. These came from three workplaces. Two of these supervisors came from a New South Wales workplace - see *Case Study No.5, Civil and Civic / Lend Lease Interiors.*

Of the 16 workplaces, 10 indicated the nature of the perceived savings. These may be categorised as:

1. higher interaction
2. greater team involvement
3. increased morale and confidence
4. less supervision time required in following up
5. reduction in lost time
6. fewer misinterpretations
7. greater assertiveness

Estimated cost savings ranged from half an hour per week to half an hour per day, and between $25 and $100 per week.

24% of respondents considered there had been no savings in this area. Of these, more than three-quarters were supervisors.

☞ *Case study No. 3: Bridgestone Australia Ltd Automotive Components Division*

☞ *Case study No. 4: Visy Board (WA) Pty Ltd*

Using a calculator

Only 32 respondents answered on this issue, with roughly one third being managers and two-thirds being supervisors. This is most logically explained by the fact that numeracy skills did not feature in a majority of the workplace programs in this study.

Because of the limited sample base of respondents, combined figures for the two respondent groups are given. 56% of the respondents perceived that their workplace had made savings from improved use of calculators by their workers as a result of language and literacy (which includes numeracy) training. For those who had rated this skill as "Not good" before the training, this combined figure was 77%, half of which felt that the savings had been better than 'minor'.

Only 6 workplaces commented on the nature of the savings. These fell into the following key areas:

1. decreased machinery downtime
2. supervisor time no longer required
3. increased accuracy on packing quantities leading to fewer credits
4. increased worker autonomy

Estimating a value of these savings proved too difficult for the majority of respondents. A rough average of the four responses indicates a reduction in lost time of somewhere between one and two hours per week.

44% of respondents considered that there had been no savings associated with this skill in their workplace. Supervisors outnumbered managers by nearly four to one in this opinion.

Calculating quantities accurately

As with the previous skill, the number of responses was lower than usual for this skill, probably because it is a numeracy-based skill which many programs in the study did not include. Of the combined respondents, therefore, 66% considered that they perceived savings accruing from improvements in this skill amongst their workforce. For those who had rated workers' ability to calculate quantities accurately as "Not good" before the training, this figure rose to 77%.

Again, only 6 workplaces commented on the nature of the perceived savings. These fell into the following categories:

1. increased accuracy in estimations of required materials
2. increased accuracy in production recording
3. less supervision time required in following up
4. reduced wastage
5. reduced rework
6. increased accuracy on packing quantities leading to fewer credits

Estimates of the value of these savings equated to a few dollars per day for the majority of respondents. However, for two workplaces, significant estimates were made. For *Columbia Nursing Homes, NSW*, there was an estimated saving of $1,790 in hospital stock orders over a one month period. For *Enfield City Council, SA*, the estimate was *"could be $1000s"*.

34% of respondents, however, felt that there had been no savings in this area. Of these, more than two-thirds were supervisors.

Calculating volumes of materials needed for a job

As might be expected from the previous two skills, the respondents for this skill were similarly reduced in number (37 only - 17 managers and 20 supervisors). The combined groups figure for those who felt that the calculation of volumes of materials needed for a job had led to workplace savings was 67%. This figure was 76% for those who had rated this skill as "Not good" before the training.

Respondents from 6 workplaces indicated the nature of the savings they had experienced here. These fell into the areas of:

1. reduced rework
2. less supervision time required in following up
3. increased accuracy
4. reduced wastage
5. increased worker autonomy

Estimates of savings ranged between $5 and $137 per week. Again, the *Enfield City Council, SA* respondent commented *"could be $1000s"*.

33% of all respondents had perceived no savings in this area since the language and literacy training. On this rare occasion, these twelve respondents were equally split between managers and supervisors.

Completing tally sheets

89% of respondents considered that there had been savings associated with the better completion of tally sheets. 56% rated the savings to be better than 'minor'. For those who had rated this skill as "Not good" before the training, this figure rose to 77%.

Five workplaces commented on the nature of the savings that they had perceived. These may be categorised under the following:

1. accurate and reliable recording
2. improved quality of data collection
3. less supervision time required

The only workplace to give an estimate of savings was *Civil and Civic / Lend Lease Interiors (Case Study No. 7)* Their estimate of saving was $70 - $140 per day.

2 respondents registered a "no savings" rating.

Completing time sheets

Of the 21 respondents on this skill, 71% considered that savings had occurred. 43% felt that the savings had been better than 'minor'. For those who had rated the completing of time sheets in their workplace as "Not good" before the training, this figure was 64%.

Five workplaces indicated the nature of the savings they had experienced. These fell into the following categories:

1. faster and more accurate completion
2. less supervisor time required
3. fewer queries from payroll officers

The estimated time savings ranged from a few minutes a week to 40 minutes per day.

Six respondents considered there had been no savings.

Completing maintenance sheets

Eighteen respondents answered about this skill. 83% felt that savings had occurred. 50% felt that these amounted to more than 'minor' savings. Of the 11 respondents who considered that this skill was "not good" before the training, all of them perceived some savings after the training and eight considered that these were better than 'minor'.

Six workplaces commented on the nature of the savings they had perceived. These fell into the following categories:

1. more accurate completion
2. aided easier identification of problems
3. less supervisor time required
4. prevention of unnecessary and / or major breakdowns

Estimates of the amount of savings in time saved in maintenance form completion ranged between 15 and 30 minutes per week.

3 respondents considered there had been no savings accruing from the language and literacy training for this skill.

☞ *Case study No. 7: Victorian Hide and Skin Producers*

The highest scoring program types

This table gathers together information from the tables in the Direct Cost savings section of the *Statistical Overview*. It indicates the highest-scoring program types for each of the respondent groups and for each of the issues on which respondents were asked to give their opinion. That is, the program indicated in each box is the program type which rated *highest* in terms of improvement of the particular issue. The program type codes are explained under "Definitions" at the beginning of the *Findings* document.

Workplace language and literacy skill	Managers	Supervisors	Both Groups
understanding written work / job orders	C, B3	B3, C	B3, C
understanding written messages	C, B3	B3	B3, C
understanding written instructions	C, B4	B3, B5	B3
reading plans	B3	B5, C	B3, B5, C
completing workplace documents generally	C, B5, B3	B5, B3, A2	B5, B3
reporting problems in writing	B5, B3	B5, B3	B5, B3
completing QC documentation	C, B3	-	-
writing short messages	C	B3	C, B3
writing minutes of meetings	B4	B5	B5, B4
understanding verbal instructions	B3, B4, C	B5, B3, B2	B3
communicating clearly with other team / crew members	B3, C	B5, B3	B3
using a calculator	B3	B3, A2	B3
calculating quantities accurately	B3, C	B3	B3
calculating volumes of materials needed for a job	B3	A2, B5, B3	B3
completing tally sheets	B4, C, B3	B4	B4
completing time sheets	B4, C	B4, B3	B4
completing maintenance sheets	C, B4	C	C
MOST COMMONLY TOP-SCORING PROGRAM TYPE(S)	B3, C	B3	B3

Table 5: *Direct Cost Savings* - Highest scoring program types *(Program codes are explained under "Definitions" at the beginning of this report)*

From Table 5, it is obvious that the most commonly top-scoring program-type is B3, a discrete program integrated with the specific workplace agenda. Other B-type programs also rated well on most issues (see details in *Statistical Overview*). What does need to be remembered, however, is the fact that, as discrete programs, they are more visible, have a definite start date, and last for a clear period of time. This raised profile makes it easier to link gains or changes which have occurred in the workplace to the period of the training program.

C-type programs, on the other hand, are far less visible and, by definition, they are also less separable from other forms of training in the workplace. In general, C-type programs are also the next stage to which B-type programs evolve, once B-type programs have proven their worth and the workplace becomes committed to the integration of language and literacy skills into the workplace.

It should therefore be borne in mind that, although the B-type programs in this report generally appear to be the top-scorers, by their very nature, they are likely to have a higher profile. Once language and literacy skills become consistently integrated into all training within a workplace, especially over several years, it becomes much harder to differentiate the gains due directly to the language and literacy skills training and those due to other workplace factors.

In light of this, it is perhaps more understandable why, among managers, C-type programs (language and literacy skills are consistently integrated into all mainstream training programs) rated overall on an equal footing with B3 programs, whereas supervisor perceptions of the value of the training programs are focussed almost exclusively on the far more visible B-type programs. Indeed, C-type programs to the outsider look like nothing other than a normal workplace training program. This begs the question: are supervisors as aware as managers of the language and literacy inclusive nature of C-type programs?

Because of the "visibility" issue, it is perhaps fairer then to point to the difference in responses to B-type and A-type programs . On every issue surveyed, improvements in skills in participants who have been given B-type programs outstrip those for A-type programs.

It is quite clear that, for both respondent groups, stand-alone English language and literacy programs, even those which have a "workplace focus" (which in general means that workplace vocabulary, generic workplace forms and safety signs are the content matter) have not in general achieved the level of improvement in the surveyed issues that B-type programs have been credited with. This is perhaps not so surprising. For many years, the A-type program was the norm in workplace language and literacy programs, and for a corresponding period, these training programs were very much marginalised activities within the workplace. It was with the advent of integrated training models that the workplace became more fully involved and therefore more interested in ensuring satisfactory outcomes.

A-type programs are of course not necessarily all dismal failures. Some of the figures from the survey do in fact indicate that A-type programs have been successful. What is to be noticed, however, is the degree to which they are rated highly and how often, compared with the ratings for the other types of program.

Similar results may be found under 'Value of the training' survey, where responses from participants and union representatives were also gathered.

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Access to and acceptability of further training

There's absolutely no doubt that our training effort from 1990 onwards would have been seriously hampered if we had not had the language and literacy training program in place in the years leading up to it.

Darrel Richardson
Manufacturing Manager
Bridgestone Australia Ltd Automotive Components Division, SA

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About the instrument [10]

This instrument was designed in response to information gathered during the initial workplace interviews for this project. Several workplaces reported that one outcome of the language and literacy inclusive training had been to increase the participants' access to further workplace training. Others indicated that it had also made the participants more positively disposed towards taking on other training. The instrument therefore raised questions to attempt to establish the extent and value of any such effects.

There were 12 of the instruments completed by respondents representing 8 of the 24 workplaces in the study. The respondents were either from management or supervisory positions. However, certain questions were completed by the researchers who addressed participant groups.

The instrument was designed to elicit statistical evidence of improved enrolments and training success rates amongst the language and literacy participants. Whilst certain workplaces could supply some statistical information in this regard, it was rarely comprehensive. This was primarily because the statistical data on workers' training achievements was often held only in terms of the whole workforce, and statistics about individual workers were not readily available.

There were also several workplaces which had no data on the training of their workers. This was due often to the fact that little or no training had been run. The language and literacy training program was in more than a few cases the first formal training program the participants had received in the workplace. In those cases, 'changes' in workers' attitudes towards training could not be established. In other workplaces, all training was compulsory for the target groups, so that it was impossible to determine any change in attendances or application for further training amongst language and literacy training participants. However, where statistics *were* available, they are presented here and are discussed in more detail in the relevant case studies, to which cross-references are given.

The questions asking respondents to rate the improvements in certain key areas pertaining to the value of trained workers were much more readily answered. Comments were also made as to the value of improvements in these areas. The findings from these two areas are the principal focus in this section.

[10] A copy of the *Access to and Acceptability of Further Training* instrument appears in the Appendices to Volume II. For a more detailed description of the instrument, see the introductory notes to the results in the relevant section of the *Statistical Overview*.

Summary

A general lack of workplace-generated statistics which could readily be accessed and applied to the purpose of this study means that global comments for the gains are not possible. However, it is clear from those few workplaces who could supply statistics or estimates that language and literacy training programs do increase the participants' access to and acceptability of further training. Nowhere was there any evidence to support the opposite view.

As before, there was a difference in opinions between respondent managers and supervisors as to the degree of improvements in language and literacy training participants' attitudes towards further training. This time, however, it was the supervisors who consistently rated the improvements higher than the managers. The issues surveyed were:

1. In-house availability of pool of relevant expertise
2. The flexibility of the workforce
3. The workplace's dependence on casual labour during emergencies
4. The workplace's dependence on contracted labour
5. Delays / lead time for getting jobs done
6. Ability to meet projected productivity targets
7. The accident rate

On a six-point scale, where "0" equals 'no change' and "5" equals 'enormous improvements', managers rated improvements on average at less than "1" for the last five of the issues on the above list, and between "1" and "2" for the first two. In stark contrast, supervisors consistently rated every issue above "2", with three of them closer to "3". In sum, this means that supervisors recognised significant changes in all these issues, where managers, for the most part, perceived little or no change.

An interpretation of this discrepancy should once again draw us to consider the perspectives of the two respondent groups. Managers, with a more holistic view, and being in general further away from the day-to-day activities occurring 'at the coalface', are less likely to notice any gains with regard to these specific issues. Supervisors, however, are more likely to perceive any changes in such critical issues as delays and lead times, meeting productivity targets, and the need to bring in other labour in emergencies or for specific tasks. These are all 'coalface' issues which far more directly affect the supervisor's day than they would a manager's.

The point should also be reiterated that supervisors in general are answering for their section of the workplace, whereas managers more generally will answer for the bigger picture. Perceived changes may have occurred in 'pockets' of a workplace which may be a supervisor's entire sphere of influence, whereas from a managerial standpoint these 'pocket' gains would be levelled out when added to other areas where no gains were perceived to have accrued.

This said, the gains noted should not be ignored. Indeed, the responses from participants appear to bear out what the supervisors have said.

In terms of accessing, applying for and coping with further training, participants overwhelmingly support the idea that the language and literacy training has helped them. Not only has it given them the necessary skills, but for many it has also changed their attitude to tackling further training. Between 53% and 84% of participants feel that the language and literacy training has played an important role in their accessing information about, applying for and succeeding in further training programs.

Specific gains from this improved access to and acceptability of further training have also been cited. However, because of the marked range of gains perceived and since, through the medium of this measuring instrument, only descriptive comments were given, these are perhaps best understood through a reading of the individual case studies where individual workplace statistics are presented.

Aspects of the workforce and the workplace

Management and supervisor respondents were asked to indicate the degree to which they felt each of the issues surveyed had improved as a result of language and literacy training participants going on to further work-related training. It is interesting to note that when asked to select the issue which they considered to be of most value to the workplace, four of the five managers who responded identified 'in-house availability of relevant expertise'. Amongst the supervisors, this was not selected once. The supervisors placed higher value on 'flexibility of the workforce' and on various more immediate production issues such as 'meeting projected productivity targets' and ' reducing delays and lead times'. These responses would seem once again to underline the different perspectives of the two respondent groups.

In-house availability of a pool of relevant expertise

All of the respondents on this issue considered that their in-house pool of relevant expertise had improved as a result of language and literacy participants going on to further training. The range of opinions was the same for both manager and supervisor respondent groups, from 'slightly' to 'significantly' improved.

On average, the supervisors rated the improvement as slightly higher than managers.

The flexibility of the workforce

On this issue, the results were very similar as for the previous issue. The range of opinions for both groups was from 'slightly' to 'significantly' improved.

However, the supervisors on average rated the improvement appreciably higher than the manager respondents.

The workplace's dependence on casual labour during emergencies

Only seven respondents (four managers and three supervisors) from four workplaces responded on this issue. The ratings ranged between 'no change' and 'slightly improved' for managers, and 'significantly improved' for supervisors.

Again, the average rating was much higher for the supervisors. The managers considered that the changes were only very slight. Supervisors, on the other hand averaged a rating half way between 'slightly' and 'significantly improved'

The workplace's dependence on contracted labour

This issue drew the same number of responses as the previous issue. The range of ratings for the managers also was the same. For supervisors, however, there was one rating of 'enormously improved' pushing the average for the supervisor respondent group very close to 'significantly improved'.

For the managers, the average rating indicates that they felt that there had been virtually no change.

Delays / lead time for getting jobs done

Five respondents from each group representing six workplaces answered on this issue. Once again, managers rated the improvements as very slight, with two out of the five considering there had been 'no change'. For the supervisors, however, the story is very different. They rated this issue as the one where most improvement had occurred. Only one gave a rating of 'no change' compared with two 'enormously improved' and two 'significantly improved'. The average for the supervisors was therefore 'significantly improved'.

What is interesting here is that three of the supervisors in one workplace each gave different ratings - 'slightly', 'significantly' and 'enormously improved'. This would once again appear to support the notion that supervisors have responded on the basis of their own particular sphere of influence, so that three different supervisors in separate sections of the same workplace may logically have three quite different experiences.

Ability to meet projected productivity targets

Nine respondents (four managers, five supervisors) answered this issue. Again, the divide between the two groups was present. Managers gave an average rating of less than 'slightly improved' whilst the supervisors considered the improvements tended more towards the 'significant' end of the scale.

The accident rate

Here again, with all ten respondents answering, supervisors considered as a group that the improvements were closer to 'significant' than to 'slight', whereas the five managers could barely discern any change.

Participant attitudes to training

Participants were asked to indicate their ability to participate in, and their attitudes towards, further training before and after they had taken part in the language and literacy inclusive training in their workplace.

Despite the small size of the sample, all of the available evidence points strongly to language and literacy inclusive training having a positive influence on participant attitudes towards further training.

ability to read information on available training courses

Statistics were available for three of the eight workplaces who responded to this instrument. For one of these, there was an 80% improvement in the number of people able to read information on available training courses. In this case, 20 out of the 25 who could not read the information before the language and literacy training were now able to do so.

For the other two workplaces, the improvement was 50%, but the number of people involved was much smaller.[11]

One of the two latter workplaces, Haigh's Ltd in South Australia, has a total workforce of 26 people, only five of which were involved in language and literacy inclusive training. The other, Alintagas in Western Australia, had only three of the language and literacy participants in further training at the time of this study. Assessment of entry level requirements for the further training had only just concluded.

ability to apply for courses

Only two workplaces responded on this issue. Both workplaces, although with widely different numbers of people involved (one with 19 participants, the other with only one), both boasted a 100% success rate in enabling people to apply for further training courses after they had undergone language and literacy inclusive training.

willingness to apply for courses

Perhaps surprisingly - because of its less quantifiable nature - five workplaces responded on this issue. The statistics of three of them rated the improvement at 100%, while two (the same two which responded to the previous two issues) indicate a 50% success rate. The 100% rating workplaces were however only talking of small numbers - only eight workers across the three workplaces. On the other hand, for the two workplaces showing an improvement rating of 50%,there were 21 workers concerned, 20 of whom were from one workplace.

[11] For more details, see *Statistical Overview*.

Degree of necessity

Nineteen language and literacy participants (representing the five workplaces) who had gone on to further training in their workplace were asked to indicate the degree to which the language and literacy training had been essential in their accessing, applying for, and coping with further training. The majority of responses indicate that language and literacy inclusive training was felt to have been necessary to their successfully accessing and coping with further training.

Gaining access to further training

61% of the respondents indicated that the language and literacy training had been an essential precursor to accessing further training, with a further 28% considering that it had probably been necessary. Only one respondent felt that it had definitely not been necessary.

Essential for applying for further training

21% of respondents considered that the language and literacy training had been essential for them to be able to apply for further training. An additional 32% felt that it had probably been essential. The remaining 47% considered that it had not been essential to their ability to apply.

Coping with further training

Only one respondent felt that the language and literacy training had been essential to coping with the further training. 53%, however, considered that it had probably been essential, and that without it they would probably have dropped out of the further training program. 17% felt that it was probably not essential, and 24% considered that it was not essential.

Passing an entrance examination to further training

At Alintagas in Western Australia, the language and literacy training was seen as a bridging course to a further training program. In this instance, entrance to the further training was through an entrance examination. Of the three workers who succeeded in passing this examination, one considered that the language and literacy training had been essential to his success, whilst the other two felt that it had probably been essential.

Skills cited as necessary for the further training

When asked to cite the skills improved by the language and literacy inclusive training program which had enabled them to cope with further training programs, these predictably varied from workplace to workplace, depending on the nature of the further training program. Overall, however, there was no particular language, literacy or numeracy based skill which was rated as more useful than any other.

Specific gains

When asked to indicate any specific gains made by the workplace which the respondents consider were due to language and literacy training participants' gaining access to further training, there were several areas of gain cited. Some of these are developed more in the individual case studies where statistics and other evidence are more clearly definable. However, the following comments indicate the areas where gains in general were perceived to have occurred.

[The employees] now clearly understand job requirements in terms of hygiene and sanitation. There has [also] been an improvement in team morale and in building a cohesive workforce.

Manager, Haigh's Ltd, SA

Improved communication generally. Greater awareness of safety issues. Improvement in productivity. Reduction in scrap.

Supervisor, Bridgestone Australia Ltd Automotive Components Dvision, SA

Makes the workforce multi-skilled so that they can do all jobs in the gardening section. Don't have to employ casuals when people are sick or on leave. [Workers] have been able to get licences. So they can get truck licence, backhoe licence, and in-house licences i.e. Toro machines, chain saws...

Supervisor, Enfield City Council, SA

Ability of participants to participate more fully in mainstream training programs; fuller participation in the overall life of the company; improved communication on the shopfloor.

Manager, Hose and Pipe Pty Ltd, VIC

More highly skilled workforce; flexibility of the workforce at the workplace, rather than calling other employees at other work sites to undertake specific task.

Manager, Alintagas, WA

From these comments, it is evident that the term 'specific gains' has been interpreted variously as perceived changes in workers' abilities, understanding of workplace issues, gaining of tickets, and general improvement of workforce flexibility.

Participation in teams and meetings

Because the operators are now really understanding the SOP - before, they never used to read it - they're saying: "Hey, this doesn't work" or "It's not logical" or "It doesn't make sense" or "Really, that's not the most effective way." So they have raised issues of "We should look at changing this". As a result, the team are now brainstorming the SOP with the Manufacturing Manager and have made variations and changes to that.

Sue Lawton,
Employment Relations Manager,
Johnson and Johnson Medical, NSW

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About the instrument[12]

As a key goal in many of the workplaces in this study, worker participation in teams and meetings was highlighted as an area for examination. There were many claims of improvements in this area, and when this measuring instrument was developed, 18 respondents representing eight of the workplaces responded. There were eight managers and ten supervisors.

The instrument itself focussed on perceived improvements in worker involvement in teams and meetings and what gains had come from this that could be evaluated. First, respondents were ask to indicate perceived changes in various key aspects of team meetings. They were asked to base their responses on teams where at least two team members had been involved in the language and literacy training program.

They were then asked to indicate perceived changes in those specific team members in terms of their levels of interest and participation and were asked to identify, where possible, what the value to the workplace had been of any perceived improvements. Finally, they were asked to identify any other possible workplace influences on the noted gains, and to what extent these had played a part.

The findings here therefore are principally based on hindsight estimates of improvements noted through observation of team members. However, in one workplace, (*Visy Board (WA) Pty Ltd - Case Study No. 4*) the workplace was able to carry out this observation immediately following the language and literacy inclusive training as this was occurring at the same time as the study. Details may be found in the case study for that workplace.

[12] A copy of the *Participation in Meetings* instrument appears in the Appendices to Volume II. For a more detailed description of the instrument, see the introductory notes to the results in the relevant section of the *Statistical Overview*.

Summary

It is evident from the findings presented in this section that, for the eight workplaces participating in this part of the study, the language and literacy inclusive training programs run have had a positive impact both on the functioning of workteam meetings and on the degree of participation in those teams of the training participants.

On the question of the functioning of the workteams, with the notable exception of minute-taking skills[13], all other aspects of team meetings surveyed were considered by a large majority of respondents to have been improved to some degree. The most improved aspects were perceived to be: focussing of team discussions, understanding of meeting procedures, team spirit, and the general amount of participation.

Again, as for previous measuring instruments, most of the improvements were perceived to be greater by those who had rated them as "Not good" before the training, although one notable exception to this was 'team spirit' which was perceived to have improved most by those who had considered it "satisfactory" before the training.

Finally, the general amount of participation was perceived to have risen considerably, regardless of pre-training ratings.

This latter point was re-emphasised in the findings of the question concerning individual improvements. With two out of every three participants showing an improvement in their team participation, as observed by supervisors and managers, and with this occurring across a broad variety of program types, it is obvious that the language and literacy training has had a significant impact in this regard.

The final findings in this section also appear to support this assertion. The only other workplace influence of any great importance was that of 'other training'. The majority of those who had considered this an influence came from workplaces where the language and literacy training was very closely integrated with that other training. It is clear therefore that improvements in team meeting functioning and member participation can be linked directly to the language and literacy inclusive training. Indeed, for most respondents, there was no other significant factor in the equation.

What is the value of improved participation? Various workplaces cited suggestions which team members had made, or actions which team members now performed which had brought significant value to the workplace. In one instance, a language and literacy participant helped in the design of a preventative maintenance program which the workplace values for its facility of easy reference. In another, there is a similar story where a team member and former language and literacy trainee drew up a reference chart to indicate which oils should be used in the maintenance of which machines in the workplace. The value of this was that an easy reference was made for the maintenance crews; easy reference automatically equates with time-saving. In another workplace, one participant now chairs his team meetings. Another, in the same

[13] This supports a similar finding by the *Direct Cost Savings* instrument which noted this skill as having the poorest rating of all the 17 skills it surveyed. For details, please refer to Page 57 .

workplace, assisted in a procedural form change. The value of this was that it helped clarify the tasks required to improve aspects of Quality. The same worker's report writing skills were also so improved that this has led to a decrease in response time to effect Quality improvements. Another supervisor reports a greater cohesion in the workteam resulting from the training; this has led to less wastage through better communication. In a food company, a suggestion was put into a memo during the actual training program and addressed to the Factory Manager concerning the safer storage of carving knives. And in one company where the manual movement of glass had been a constant hazard, with more than a few near misses in the past, a suggestion to use of a fork-lift and make a slight change to the floor lay-out was adopted. The safety hazard has been completely eliminated.

When one tries to consider how one might measure the impact of workplace language and literacy training, one need only look at this list of outcomes to realise that measurement is generally only possible in a narrow, immediate, skills-gained sense. This is because the skills that are learned become the channels through which valuable ideas may or may not travel out into the open. And to take account of all the potential savings that such as yet unaired suggestions may bring is a clear impossibility.

Aspects of team meetings

The respondents were asked to give 'before and after' ratings for each of seven team meeting issues. As with all the instruments, the possible pre-training responses were either '*not satisfactory*', '*satisfactory*', or '*highly satisfactory*'. Post-training responses were based on a series of five comments ranging from '*worse than before*' to '*much improved*'.

Since no respondents answered '*worse than before*' for any of the issues, a scale is used for the average *improvements* referred to in the findings below. In this scale, '0' equals 'no change' and '5' equals 'much improved'.

Because of the limited number of respondents, combined figures are given for the two respondent groups for certain statistics.

Focussing of team discussions

95% of respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on the focussing of team discussions in subsequent team meetings. 67% felt that the improvement was more than 'minor'.

For those who had rated this issue as "Not good" before the training, the improvement was considerably higher than for other pre-training ratings. On average, supervisors rated improvements at 3.3 on the five-point scale, compared with an average manager rating of 2.2.

Only one respondent considered there had been no change on this issue.

Understanding of problem-identification and problem-solving tools

72% of respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on worker understanding of problem-identification and problem-solving tools. 50% felt that the improvement was more than 'minor'.

For those who had rated this issue as "Not good" before the training, on average, supervisors rated improvements at 1.4 on the five-point scale, compared with an average manager rating of exactly 2.

Five of the 18 respondents considered there had been no change on this issue.

Use of problem-identification and problem-solving tools

72% of respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on team members' ability to use problem-identification and problem-solving tools in team meetings. However, only 28% felt that the improvement was more than 'minor'.

For those who had rated this issue as "Not good" before the training, the improvement was somewhat higher than for other pre-training ratings. However, on average, supervisors rated the improvements at 1.4 on the five-point scale, compared with an average manager rating of 1.6. In other words, improvements were seen to be only little more than 'minor'. This is perhaps not surprising, given the almost equally low ratings for the team members' understanding of the same tools (see previous issue).

Again, five respondents considered there had been no change on this issue.

Understanding of meeting procedures

83% of respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on team members understanding meeting procedures, and 61% felt that this improvement was more than 'minor', with 22% considering it was 'much improved'.

For those who had rated this issue as "Not good" before the training, the improvement was considerably higher than for other pre-training ratings. On average, supervisors and managers alike rated improvements at exactly 3 on the five-point scale. That is, they all felt that this issue had been 'somewhat improved'.

Three respondents considered there had been no change on this issue.

Minute-taking skills

Only 4 of 16 respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on the team's minute-taking skills. All of these felt that the improvement was more than 'minor', with two respondents rating it as 'much improved'.

For those who had rated this issue as "Not good" before the training, the improvement was considerably higher than for other pre-training ratings. On average, supervisors rated improvements at a very low 0.3 on the five-point scale, compared with an average manager rating of 2.

75% of the respondents considered there had been no change on this issue.

Team spirit

89% of respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on the sense of team spirit in their teams, and 56% felt that the improvement was more than 'minor'.

For those who had rated this issue as 'satisfactory' before the training, the improvement was considerably higher than for other pre-training ratings. On average, supervisors rated improvements at 3.3 on the five-point scale, compared with an average manager rating of 1.8.

One possible interpretation of this is that the language and literacy inclusive training building on an existing cohesion in a team. Where this is not good before training, the language and literacy training has less impact.

Only two respondents considered there had been no change on this issue.

General amount of participation

95% of respondents considered that the language and literacy inclusive training in their workplace had had a positive impact on the general amount of members' participation in meetings. 72% felt that the improvement was more than 'minor', with four of the 18 respondents considering it was 'much improved'.

On average, regardless of pre-training ratings, supervisors rated improvements at 3.1 on the five-point scale, compared with an average manager rating of 2.6.

Only one respondent considered there had been no change on this issue.

Of all the issues, this one indicates perhaps most clearly that the language and literacy inclusive training has had a significantly positive impact on participation in teams, regardless of its perceived pre-training status.

Individual improvements in team participation

Respondents were asked to rate improvements in individual team members who had participated in the language and literacy training program in their workplace. The ratings were to be based on changes in each person's interest in and participation in meetings.

Across seven workplaces, 41 participants were so rated using a scale of four comments. These were:

1 = actively participates regularly
2 = shows interest and actively participates occasionally
3 = shows interest but does not actively participate
4 = shows no interest

This scale was used for the ratings given for both before and after the training.

63% of the participants concerned (26 workers) were considered by observers to have improved. Across the 26 workers, an average improvement of 1.5 rating categories was achieved. The following table shows the amount of improvement achieved by the individual participants.

Degree of improvement - movement from one rating category up to another	Number of participants
4 ⇨ 3 (one category)	1
4 ⇨ 2 (two categories)	3
4 ⇨ 1 (three categories)	2
3 ⇨ 2 (one category)	7
3 ⇨ 1 (two categories)	6
2 ⇨ 1 (one category)	6
TOTAL	25

Table 6: Improvement in individuals' participation in team meetings since langauge and literacy inclusive training

Table 6 shows some interesting effects. The most interesting is the movement from rating categories 3 and 2 upwards. These figures are higher than for movements from rating category 4. This might well be expected, since categories 2 and 3 indicate that the team member is interested but does not participate fully. The language and literacy training can therefore be seen, according to the respondents, to be having the required effect on these people, by giving them the communication skills with which to participate more fully.

Those who have improved from an original category 4 rating are fewer in number. However, there were only seven of the 41 observed workers who were originally rated as category 4. From the table, six of these have made an improvement of some kind, which in effect equates to those people now being rated as at least interested in the team's business.

This may be true, but perhaps a more probable interpretation is that those participants have now gained enough language and literacy skills to understand what is going on in the meeting. This interpretation is made all the more probable for the simple reason that all seven of the category 4 participants were NESB workers.

One final statistic of interest under this heading is that for the different program types. On average, B2, B3, B4 and C-type programs had the same number of participants who did not show any change. However, for those which did show a change, B3 and C-type program participants improved on average by 1.5 - 1.6 categories, as compared to 1.25 for B4 and only 1.00 for A1 programs.

Other influences

In order to more clearly assess the effect of the language and literacy training programs on worker participation in team meetings, each workplace was also asked to note which of a list of other changes, if any, had occurred in relation to the teams already discussed. The number of responses for each issue and the degree of perceived influence are summarised in the following table:

Issue	No influence	Minor influence	Significant influence	Total No. of responses
Changes to team make-up	8	6	2	16
Other training	4	7	5	16
IR changes	7	4	1	12
Changes to documentation	9	4	3	16
Changes to team procedures	8	8	0	16
Notable changes in members' working conditions	8	7	1	16
Notable changes in members' personal lives	7	2	4	13

Table 7: Other influences on perceived changes to worker participation in team meetings since language and literacy training

Table 7 clearly shows that, for the most part, any influence from other sources was at most minor, but for many non-existent. The only really significant issues that also may have had an influence on the improvements observed in worker participation in team meetings were 'other training' and 'notable changes in personal lives'.

Four of the five respondents indicating that 'other training' had had a significant influence were from workplaces either with a C-type program, where language and literacy skills are consistently integrated into all workplace training, or with programs where the language and literacy was integrated into another training program. The effects of the language and literacy inclusive training in all of these cases is impossible to separate from those of other training.

From this, we might reasonably state that the observed improvements in worker participation in teams and team meetings are almost entirely due to the language and literacy inclusive training.

Promotion and job flexibility

ELT [English language training] has enabled me to rotate the whole section [of 45 workers] with great success. Prior to ELT, people stayed in the same job, and would not move.

Supervisor,
Bridgestone Australia Ltd Automotive Components Division, SA

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About the instrument [14]

The *Promotion and Job Flexibility* measuring instrument was again a product of the initial workplace interviews. Several interviewees had indicated that they felt the language and literacy training in their workplace had led to greater workforce flexibility and to certain workers applying for promotion.

Designed with separate sections to be completed by different respondent groups, 33 respondents completed it, representing eight of the 24 participating workplaces. The three respondent groups were managers, participants, and supervisors[15].

The questions focussed on eliciting information with regard to the two distinct issues of promotion and job flexibility.

In the case of promotion, statistics were sought which might indicate a greater incidence in worker applications for internal promotion coming from workers who had undergone the language and literacy training. Questions also sought to isolate the source of any changes found and to establish what value the workplace set on promoting internally. With the exception of one workplace, no statistics relating to internal promotions were forthcoming. The reasons for this are laid out in the introduction to the statistics for this instrument in the *Statistical Overview*. In essence, either statistics existed for outside recruitment only or there had been virtually no promotional opportunities for the workers in question and therefore no meaningful 'before and after' statistics could be generated. The findings on this issue are therefore limited to the comments made principally by managers - but also by a few supervisors - on the question of the value of being able to promote internally.

On the issue of job flexibility, there was decidedly more information forthcoming. This took the form of statistics of estimated improvements in the flexibility of workers to carry out certain workplace tasks which had a language and literacy component. As always, a question was posed asking for identification of other contributing factors to the perceived gains.

The findings in this section continue with similar questions being posed of participants. They were asked to respond to the same issues as the supervisors. For each of these issues, these findings are presented both for the total group, and with an ESB / NESB and a male / female split where appropriate.

Finally, a brief indication of the participants who have applied for promotion is given, and a summary of their principal reasons is also recorded.

[14] A copy of the *Promotion and Job Flexibility* instrument appears in the Appendices to Volume II. For a more detailed description of the instrument, see the introductory notes to the results in the relevant section of the *Statistical Overview*.

[15] For a more detailed breakdown of the respondents, please refer to the relevant section of the *Statistical Overview*.

Summary

On the issue of job flexibility, there is ample evidence from the findings in this section to suggest a very strong and direct link between language and literacy training and improved worker flexibility. Answering separately on the same issues, both the managers / supervisors group and the participants group cited equally considerable gains in all but one of the aspects of job flexibility that were surveyed.

In terms of the flexibility to move from one workplace task or role to another, to take on further responsibilities or duties in situations of need, and to take on tasks involving the use of reading, writing or verbal skills, both groups cite enormous improvements in workers now able to do this. The improvements all fall within a range of 300% - 1000% increase in the numbers of workers able to fulfil these tasks after the language and literacy training compared with before the training.

Only the ability to be successfully redeployed to another task rated comparatively modestly.

With few other influences cited as having an impact on these figures, it is hard to see how a direct link to language and literacy training could not be established.

The value to the workplaces concerned is considerable. From the *Access to and Acceptability of Further Training* section of this document, as well as from countless comments made to the effect in interviews, it is clear that worker flexibility is highly valued. From this, and with the 'in-house pool of relevant expertise' rating even higher, an increase in worker flexibility through language and literacy training is a very significant effect.

To this, we may also add the findings relating to the value of internal promotion. By far the supervisors' most commonly cited valuable aspect of internal promotion was 'use of existing knowledge and skills'. If we then add the findings of the participants' perspective on the key reasons for seeking promotion, we find that 'improved language and literacy skills', 'improved confidence' and 'improved verbal skills' top the list. (We should note that very few ESB participants responded on this issue.)

From this interrelation of perspectives, it is clear that language and literacy skills are central to the worker flexibility issue. Without them, there is likely to be a lower level of worker flexibility, less access to an in-house pool of expertise, fewer workers able to seek promotion, and fewer opportunities for the workplace to promote from within. This leads almost unavoidably to the need to recruit from outside and all the costs that that involves, both tangible and intangible.

One further issue which is raised by the findings in this section concerns NESB workers and their decidedly language-skills-based reasons for not applying for promotion. It would not be unreasonable to extrapolate from this, especially given the pre- and post-training statistics on readiness to apply for promotion, that NESB workers who receive language and literacy training are more likely to apply for promotion than those who do not receive this training.

This is perhaps particularly significant for those workplaces which employ significant numbers of NESB workers whose language skills act as a barrier to promotion. The suggestion is that through effectively targeted language and literacy training, the workplace is not only likely to gain workers who can be more flexible in their work, and who are more readily 'promotable', but also it would appear from this research that they will also gain workers whose key personal reasons for not applying for promotion have for the most part been removed.

With the latter figures coming from across only four workplaces, some may consider these suggestions tend more to free interpretation than to conclusive evidence of a direct link between worker flexibility and worker readiness to apply for promotion.It should, however, be stated that the statistics for the sample group lean so completely in the one direction that any other interpretation based on these statistics would be unfounded.

The value of internal promotion

The following list indicates the aspects of internal promotion which managers and supervisors considered to be of value to the workplace. There were 12 respondents to this question. The figure after each item indicates the number of respondents who referred to this as an item of value.

Valuable aspect of internal promotion	No. of respondents who mentioned this
Use of existing knowledge and skills	11
Keeping up morale	5
Time and money spent on outside recruitment	3
Building loyalty to the company	2
Greater trust in supervisors / managers who have come up from 'the floor'	1

It is quite obvious from the above that the greatest value a worker has to the workplace is the skills and knowledge of the job he/she has.

When asked to quantify the cost of recruiting someone from outside, there were various estimates. One workplace cited recruitment costs at $5000 per position. The same manager suggested that loyalty "could be valued at hundreds of thousands of dollars". Another suggested that variables in the equation were the impact on current employees being overlooked, workplace morale generally, impact on production, and safety. Another added to this list the time taken in recruiting, the time of a trainer inducting the new recruit, and the loss of production or productivity while this is occurring.

If there is an opportunity to promote someone internally, it is therefore likely to be the more attractive alternative. However, as so many interviewees commented, the barrier so often is that those one would like to promote could not cope with the communication skills demands of the promotional position. The costs of recruiting a new person from outside would therefore need to be weighed carefully against the costs of giving the preferred internal employee the language and literacy training necessary for the position, always assuming that the person in question is prepared to make the effort.

The following section highlights what impact language and literacy inclusive training can have on the preparedness of a worker to take on other workplace roles which require a higher degree of communication skills.

Job flexibility

Supervisors and managers were asked to indicate the number of language and literacy training participants in their workplace who had certain abilities related to job flexibility both before and since the training. In all cases, four workplaces were able to supply figures.

Being readily movable from one workplace task / role to another

Across the four workplaces, respondents considered only 6 participants could readily be moved from one workplace task or role to another before the language and literacy training program. After the training, this figure had increased ten-fold to 61. The smallest shift amongst the workplaces was an improvement of only one participant; the greatest increase was an improvement of 28 participants.

Readily taking on further responsibilities / duties in situations of need

10 participants across the four workplaces were capable of taking on further responsibilities / duties in situations of need before the training. After the training, this figure had risen to 56. In one workplace, there had been no change. In the largest improvement, 27 participants had gained this ability.

Taking on tasks which involve the use of reading and writing skills

Respondents counted 14 participants as capable of taking on tasks involving reading and writing skills before the training. After the training, this figure had also risen to 56. Once again, one workplace registered no change. In the largest improvement, 27 participants had gained this ability.

Taking on workplace tasks which involve the use of verbal skills (such as using a two-way radio or telephone, or giving instructions)

24 of the participants in the four workplaces could take on such tasks before the training program. After the training, however, this figure had risen to 37. Again, there was one workplace where no improvement was registered, and the largest shift in one workplace was 9 participants gaining this skill.

Being successfully redeployed to another task for a limited period

Finally, only 7 participants were seen to be capable of this before the training, whereas 17 were capable of it after the training. The largest improvement in any one workplace was 15 participants gaining this ability. In one workplace, there was no change registered.

Note: The workplace which registered no change in each of the last four skills ran an A-type program, where language and literacy skills were taught almost completely in isolation from the work of the workplace. Conversely, the two workplaces which consistently saw a high achievement rate both ran B-type programs where the language and literacy training was integrated with a specific workplace agenda. The fourth workplace which experienced an appreciable if less dramatic achievement rate also ran a B-type program. Although not conclusive, taken with the other evidence earlier in this document, this present information gives extra weight to the perception that B-type programs have greater impact on the workplace than do A-type programs.

A fifth workplace consistently gave the same before and after figures so that no gains were registered. For this reason, it was not included in these statistics. This workplace also ran an B-type program, but this was principally concerned with numeracy skills which probably explains the reason for no apparent gains in this series of questions focussing more on reading, writing and speaking skills.

Other influences

Amongst the respondents, a supervisor from the most successful of the four workplaces (on the above figures) stated:

"Skills training [influenced] as well, but [this] wouldn't have been possible without the language and literacy training."

Amongst the other workplaces, one considered that, although they had gained the language and literacy skills required for greater flexibility, most of the participants:

"are settled and content in their niche. They are performing the spoken and written skills required of the job much better since the training, but they are not interested in changing their jobs or moving to other locations."

This comment indicates another variable which is almost totally unpredictable in the value of language and literacy training equation, or that of any training for that matter. Even if workers gain the relevant communication skills, there is no guarantee that these will then be used to their fullest capacity in the service of the workplace. There are some who will and there are some who won't - the greatest difficulty is that often it is impossible to predict who will use them and who will not until the training is done.

There were no other significant influences identified which might influence workers to take on more versatile roles involving the use of language and literacy skills.

From the participants' perspective

For various reasons it was not possible to interview the participants in the highest achieving workplace of the four mentioned in the previous two pages. However, interviews with participants in the other three workplaces were carried out. They were asked the same questions about job flexibility. Please note, the total figures differ because it was not possible to speak to all 74 participants. The researchers did manage to track down 34 of the participants. A breakdown of the figures for the respective backgrounds and genders is also given where appropriate.

There were 5 ESB women, 10 ESB men, 13 NESB women, and 6 NESB men.

Can readily move from one workplace task / role to another

Of the 34 respondents, 11 felt they could already do this before the training. After the training this had risen to 31.

The background and gender breakdown of the responses indicates that the greatest change occurred amongst NESB women. Only two of them could do this before the training, compared to 12 afterwards, a six-fold increase. The figure for the entire female group (18 respondents) moved from 5 before to 17 after.

Amongst male respondents, the before and after figures were 6 and 14 respectively.

Three participants (9%) failed to achieve this ability.

Can readily take on further responsibilities / duties in situations of need

Of the 34 respondents, 9 felt they could already take on further responsibilities / duties in situations of need before the training. After the training, this had once again risen to 31.

The background and gender breakdown of the responses indicates that the greatest change occurred once again amongst NESB women. Only three of them could do this before the training, compared to 13 afterwards. The figure for the entire female group (18 respondents) moved from 6 before to 18 after.

Amongst male respondents, the before and after figures were 3 and 13 respectively. Both ESB and NESB men appear to have made significant gains here.

Three participants failed to achieve this ability.

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Can take on tasks which involve the use of reading and writing skills

Of the 34 respondents, 13 considered they were already capable of doing this before the training had occurred. The post-training figure was 30. The greatest movement here was achieved by the men, particular those from an ESB background. The latter moved from 2 before the training to 10 afterwards.

- Of the 13 who felt they could already do this task before the training, 9 were women. The gains for this group therefore appear smaller. Nevertheless, NESB women still doubled their number from 5 before to 10 after.

Four people considered they still did not have this ability after the training. All of these were NESB workers, three women and one man.

Can take on workplace tasks which involve the use of verbal skills (such as using a two-way radio or telephone, or giving instructions)

20 of the 34 respondents considered they had this already before the training. The figure rose to 33 after the training.

The men made the greatest move here, going from 6 before to 16 after.

The remaining three successes were NESB women.

Can be successfully redeployed to another task for a limited period

On this issue, the gains were noticeably lower than for the other abilities surveyed. Of the 34 respondents, 11 considered they could do this before the training, and this figure almost doubled to 21 after the training.

The gains appear to be fairly evenly spread across the four groups, the greatest gains being amongst NESB women. Nonetheless, for the four NESB women gaining this ability, there were 5 more who did not.

13 respondents considered themselves still unable to do this after the training - 6 ESB men, 5 NESB women, and 2 NESB men.

Reasons for seeking promotion

26 participant respondents indicated that they would not have applied for promotion before the language and literacy training program. Of these, 11 were NESB men, 13 were NESB women, and 2 were ESB men. After the training, these figures were 1, 0, 5 respectively. There are three things to note here.

Firstly, none of the ESB women responded to this question at all, and in later comments indicated that they were not interested in seeking promotion. Secondly, the ESB men figure has actually worsened, with three more after the training saying they would not apply.

The most significant figures, however, concern the NESB respondents. Of 22 people who before the training said that they would not apply for promotion, 21 said after the training that they would.

Reasons for applying for promotion

The participants were asked to indicate their reasons for saying they would now consider applying for promotion.

	ESB Male	NESB Male	NESB Female	TOTAL
Improved language and literacy skills	2	11	13	26
Improved confidence	1	11	13	25
Improved verbal skills	-	8	12	20
Financial need	-	9	11	20
Application encouraged by workplace	1	9	5	15
Suitable opportunities available	1	-	5	6
Improved completion of application form	-	-	4	4
Current position is under threat	1	-	-	1
Greater understanding of workplace language and procedure	-	-	1	1

Table 8: Reasons cited for applying for promotion after language and literacy training

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From Table 8, certain conclusions may be drawn with regard to NESB workers more readily than with regard to their ESB counterparts. The three most frequently cited reasons for the former group are all directly related to the language and literacy inclusive training - improved language and literacy skills, improved confidence, and improved verbal skills.

'Value of the training' survey

It's brought the cultures together. These people were calling those people names and vice versa. We are now able to swap and change our people [round] and they get on. The machines are therefore more productive. Before they wouldn't talk to each other. Now they do.

Bob Goddard,
Production Foreman
Visy Board (WA) Pty Ltd

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About the instrument [16]

This instrument was specifically developed to glean information from all 24 participating workplaces. It is the only instrument of the five in the project to be administered across all the workplaces. Indeed, because of its universal applicability, it was also administered in six other workplaces not otherwise involved in the project. There were precisely 400 responses from the four respondent groups: 274 Participants, 62 Supervisors, 43 Managers, and 21 Union Representatives.[17]

The survey was designed to gather data relating primarily to the gains of workplace language and literacy inclusive training programs relating to personal and interpersonal factors. Such items as morale, confidence to communicate, and attitude to training are included. Gains in these, and other similar areas, have long been reported in qualitative research and in end-of-course evaluations across all industry, enterprise and program types. However, with the purpose of the current project to *quantify* outcomes wherever possible, the goal here was to evaluate how often similar opinions were expressed. In essence, this is what the first set of findings from this instrument represent.

Following this, there are findings based on the data collected from the second question, which was posed only of participants. Here, the findings indicate the degree to which participants consider they have gained workplace-related language and literacy skills through the training they have received. These figures are fairly superficial in themselves, but may act as an overview. More detail can be gained through an examination of the findings presented in the other sections of this document where the same skills are revisited through different question formulations. Fuller statistics plus interpretive commentary are available in the relevant sections of the *Statistical Overview*.

Finally, when details of a case study relate to any particular finding, cross-references to the case study in question are given.

[16] Four copies of the instrument (each respondent group received a slightly different version) appear in the Appendices to Volume II. For a more detailed description of the 'Value of the training' instrument, see the introductory notes to the results in the relevant section of the *Statistical Overview*.

[17] For breakdowns of the 400 responses by industry category, program type etc. refer to the *Statistical Overview*.

Summary

Personal and Interpersonal factors

The results from this survey show quite conclusively that, in workplaces where language and literacy inclusive training has been run, the vast majority of managers, training participants, supervisors and union representatives believe that such training is beneficial across virtually the whole range of workplace and workforce issues surveyed. Not surprisingly, in the majority of cases, the degree of improvement was perceived to be highest when the issue in question was rated as "Not good" before the training took place.

Notwithstanding, the following table highlights the percentages of people in each group, and across the whole respondent body, who felt that the corresponding issue had been improved by the training. The figures take no account of the perception of the issue before the training.

	Managers	Participants	Supervisors	Union reps	All Groups
Morale	95%	84%	79%	90%	85%
Verbal communication	100%	81%	81%	100%	84%
Written communication	88%	85%	74%	95%	84%
Management / 'shopfloor relations	79%	64%	74%	71%	68%
Attitude to training	91%	82%	84%	86%	83%
Involvement in training	83%	83%	76%	95%	83%
Creation of a training climate	87%	(not asked)	75%	80%	80%
Participation in meetings	89%	74%	71%	85%	76%
Understanding workplace change	86%	69%	71%	90%	72%
AVERAGE PERCENTAGE RATING ACROSS ALL ISSUES	89%	78%	76%	88%	79%

Table 9: 'Value of the training' survey, Question 1 - Percentages of respondents indicating improvement since language and literacy inclusive training

Participant skill gains

As far as the participants' perceptions of their gaining (or otherwise) of workplace language and literacy skills, the results of this survey are far less conclusive. For all skills, with the exception of "writing messages for others at work" (40%) and "using a calculator (49%), more than 50% of participants in each case considered that they already had the skills being surveyed. Furthermore, large numbers also rated many of the skills as 'not part of their job'. These two facts have meant that indications of gains for most of the skills are generally based on a much reduced sample base - in two cases as few as 29 respondents. Therefore, whilst the figures are still valid, it would be unwise to extrapolate these percentages across other similar workplaces or industries.

This said, three of the skills did have a sample base of more than 60 respondents who considered that the skill was a part of their job but that they did not possess it before the training. The skills were:

- writing messages for others at work (90 respondents)
- speaking at team meetings (76 respondents)
- completing own workplace documents (63 respondents)

The success rates (participants gaining the skill through the training) respectively were 54%, 59%, and 74%. For those workers who gain such skills which are a part of their jobs, there are important gains to their workplaces:

1. For those who need to write messages for others in their work, not being able to do so leads to inefficiencies, for example, at shift changeovers. There could conceivably even be safety risks involved. For those who are forced to give their messages verbally because they cannot do so in writing, time is wasted all round, especially if the message bearer and receiver are not in the same location. Coupled with an inability to use a two-way radio or telephone, this can be a source of enormous waste.

2. Speaking at team meetings is an essential part of effective teamwork. Those who lack the skills or confidence to participate may undermine the work of the team. Where problems are unvoiced, or solutions are held back for fear of exposure or ridicule, the effectiveness and efficiency of the team as a unit is diminished, and so in turn is the workplace in which it operates.

3. Completing one's own workplace documents has to be one of the most commonly cited sources of frustration of supervisors, leading-hands, gangers, and any others in front-line management. The most usual complaint is that he / she has to complete the time sheets, worksheets, accident reports etc. for his / her workers because they can't do it for themselves. Whether it is done willingly or grudgingly, for the workplace this is an inefficient draw on the front-line manager's time. On a daily or weekly basis, this problem can add up to hundreds of wasted hours each year.

The indicated gains in these skills in these survey figures therefore point to considerable value to the workplace of language and literacy inclusive training.

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Also of interest, finally, is the comparatively high numbers of respondents who considered many of the generic skills as 'not part of their job'. These included such skills as 'completing job documentation' (21%), speaking at team meetings (13%), speaking to management (11%), and 'completing their own workplace forms' (10%). An examination of the workplaces concerned indicates a prevalence of such responses amongst the Western Australian respondents - they account for at least half of these responses for each skill. Amongst the WA workplaces, there are three which have only recently (since 1994) embarked on the road to workplace change, through the introduction of workteam concepts on the shopfloor and / or through the introduction of Quality Control systems. This may possibly explain these high figures. However, one South Australian workplace where these structures and systems have been fully implemented for some years also rates comparably highly on two of the issues.

As a general statement, it is possible to say that the results from the "Value of the training' survey point to considerable impact of the language and literacy inclusive training on workplaces.

Personal and interpersonal factors

Worker morale

95% of managers considered that worker morale had improved as a direct consequence of the language and literacy inclusive training run in their workplace. Of these, 57% rated the improvements to be either 'significant' or 'enormous'. This figure increases to 70% for those who had rated worker morale as "Not good" before the training.

Union representatives were almost as enthusiastic, giving ratings of 90% and 43% respectively. This latter figure rose to 60% for those who had rated worker morale as "Not good" before the training.

84% of participant respondents rated their own morale as having improved, 20% of them considering it had improved 'enormously'. For those who had rated their morale as "Not good" before the training, 26% considered they had improved enormously, and a further 45% had improved 'significantly'.

Amongst supervisor respondents, 79% said worker morale had improved, but only 34% considered this had been to a 'significant' or 'enormous' degree. Amongst those who had rated worker morale as "Not good" before the training, this figure was 36%.

Just under 15% of the total respondent group felt that worker morale had been left unaffected by the training. However, for those who had rated worker morale as "Not good" before the training, this figure dropped to just over 7%.

Confidence to communicate verbally

100% of managers and union representatives concurred in considering that worker confidence to communicate verbally had improved in their workplaces since the language and literacy inclusive training. They did differ by degree, however. 72% of managers considered it had improved by a 'significant' or 'enormous' amount, whereas only 48% of union representatives felt the same. These figures rise to 81% and 61% respectively for those who had rated this issue as "Not good" before the training.

Participants and supervisors also partly agreed with each other. 81% of both respondent groups considered that improvement had occurred. 56% of participants considered the improvement to be 'significant' or better, whereas only 44% of supervisors felt this. For those who had rated this issue as "Not good" before the training, however, the figures were 83% (participants) and 54% (supervisors)

Approximately 16% of the total group considered that no change had occurred. Importantly, for those who had rated this issue as "Not good" before the training, that figure drops to less than 4%.

Confidence to communicate in writing

95% of union representatives, 88% of managers, 85% of participants, and 74% of supervisors considered that worker confidence to communicate in writing had improved. For all respondent groups except for the supervisors, just over half considered that the improvements were 'significant' or 'enormous'. 33% of supervisors agreed, but a further 40% considered the improvements to have been 'minor' only.

For those who had rated this issue as "Not good" before the training, the figures increase by only one or two percentage points each.

Exactly 16% of the total respondent group considered that there had been no improvement. This figure fell slightly to 12.5% for those who had rated this issue as "Not good" before the training.

Management / 'shopfloor' relations

Ratings for improvements in management / 'shopfloor' relations were a little lower than for the previous three items. Although 79% of managers, 74% of supervisors, 71% of union representatives and 64% of participants considered there had been improvements in the area of management / 'shopfloor' relations, approximately only a third of each group considered that this had been to a 'significant' or 'enormous' extent.

Amongst those who had rated relations as "Not good" before the training, the picture was considerably different only for the managers, 42% of whom considered that 'significant' improvements had occurred, and a further 33% claiming 'enormous' improvements.

Roughly one in three of all respondents considered that their had been no improvements in this area. For those who had rated this issue as "Not good" before the training, this figure was closer to one in five.

Loyalty to the workplace

73% of managers (compared to only 45% of supervisors) considered that management / 'shopfloor' relations had improved. Despite this difference, the two groups were closer in number on the question of degree of improvement. 15% of managers and 9% of supervisors felt that improvements had been 'significant', and only 2% of each felt that 'enormous' improvements had occurred. For those who had rated this issue as "Not good" before the training, there was no appreciable difference in these figures.

40% of all respondents considered there had been no improvement.

Participation in union affairs

62% of union representatives considered there had been gains in this area, but only one in five considered that they had been anything more than 'minor'.

For those who had rated this issue as "Not good" before the training, similar percentages were noted.

Attitude to training

This, of all the issues, gained the highest improvement ratings across all four respondent groups.

91% of managers, and 86%, 84% and 82% of union representatives, supervisors and participants respectively, considered that worker attitude to training had improved because of the language and literacy inclusive training in their workplace. As to the degree of improvement, 72% (managers), 52% (union representatives), 53% (supervisors) and 63% (participants) considered the improvement had been 'significant' or 'enormous'.

For those who had rated this issue as "Not good" before the training, those figures rose to 88% (managers), 71% (union representatives), 72% (supervisors) and 66% (participants).

A particularly noteworthy statistic is that one in three participants considered their own attitude to training had improved 'enormously'. This statistic is borne out in several other sections of the findings and in the case studies. (For those who had rated this issue as "Not good" before the training, the one to three ratio remained unchanged).

16.5% of all respondents, however, felt that there had been no improvement in this area. It is perhaps interesting to note that three out of four giving this response were also participants. For those who had rated this issue as "Not good" before the training, those who felt that no improvement had occurred was just under 7%.

Involvement in training

Again, a high scoring issue on the improvement scale. 95% of union representatives, 83% of managers and participants, and 76% of supervisors considered that worker involvement in training had improved. More than a third of each group considered the improvement had been 'significant', whilst 24% and 25% of managers and participants respectively felt the improvements to have been 'enormous'.

For those who had rated this issue as "Not good" before the training, the joint 'significant' and 'enormous' improvement ratings increased to 85% (managers), 62% (participants), 72% (supervisors) and 75% (union representatives)

Approximately 18% of the total respondent group considered that there had been no improvement on this issue. For those who had rated this issue as "Not good" before the training, however, that figure was halved.

Creation of a training climate

87% of managers, 80% of union representatives and 75% of supervisors stated that the language and literacy inclusive training had helped to establish or develop further the training climate

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within their workplace. Considering the improvement to be 'significant' or better were 53% of managers, 45% of union representatives and 35% of supervisors.

Nearly 20%, however, considered that no improvement had occurred. Of this group, the supervisors outnumbered the others by more than two to one. For those who had rated this issue as "Not good" before the training, only 2.5% expressed this view.

☞ *Case study No.3, Bridgestone Australia Automotive Components Division*

Participation in meetings

For the four respondent groups: managers, union representatives, participants, and supervisors, 89%, 85%, 74%, 71% respectively felt that improvements had occurred. However, only managers and participants registered in numbers that these had been 'significant' or 'enormous'; 55% and 46% of each group respectively made this comment. By comparison, supervisors and union representatives weighed in at only 29% and 25% respectively.

For those who had rated this issue as "Not good" before the training, there was no appreciable difference from these figures.

Almost one in four (24%) of the entire respondent group considered that no gains had been made here. For those who had rated this issue as "Not good" before the training, the figure was 19.5%.

☞ *Case study No.4, Visy Board (WA) Pty Ltd*

Understanding workplace change

90% of union representatives, 86% of managers, 71% of supervisors, and 69% of participants considered that worker understanding of workplace change had improved because of the language and literacy inclusive training. More managers and participants (50% and 47% respectively) than union representatives and supervisors (38% and 27%) considered the improvements to be 'significant' or 'enormous'. For those who had rated this issue as "Not good" before the training, the figures were 54% (managers), 39% (participants), 33% (union representatives) and 31% (supervisors).

An important figure to note is that nearly one in five of the 270 participant respondents to this question felt that their understanding of workplace change had improved 'enormously'.

However, 28% of all respondents considered that no gains had been made in worker understanding of workplace change. For those who had rated this issue as "Not good" before the training, 22% was the figure, shared roughly equally between participants and supervisors.

☞ *Case study No. 9: Don Smallgoods*

The highest scoring program types

Table 10 gathers together information from the relevant section of the *Statistical Overview*. It indicates the highest-scoring program types for each of the respondent groups and for each of the issues on which respondents were asked to give their opinion. That is, the program indicated in each box is the program type which rated highest in terms of improvement of the particular issue. The program type codes are explained under "Definitions" at the beginning of the *Findings* document.

	Managers	Participants	Supervisors	Union reps	All Groups
Morale	B3	B3	B3	C	B3
Verbal communication	B3	B2	B3	C	B3
Written communication	B3	B1	B3	B3	B1, B3
Management / 'shopfloor relations	B3	A1	-	C	A1, B3, C
Attitude to training	B3	B2	B3	B3	B2, B3
Involvement in training	B3	B2	B3	B3, C	B3
Creation of a training climate	B3, B5	(not asked)	B2	C	B5
Participation in meetings	B3	A1	B3	C	B3
Understanding workplace change	B4	B1 ,B3	B3	A1, B2 ,B3	B3
MOST COMMONLY TOP-SCORING PROGRAM TYPE(S)	B3	B2	B3	B3, C	B3

Table 10: 'Value of the training' survey. Question 1 - Highest scoring program types * *(Program codes are explained under "Definitions" at the beginning of this document).*

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* **Note**: Table 10 refers to the top-scoring program types only.. Other program types which scored well but which do not feature on the table because they did not "top-score" may be found in the *Statistical Overview*. This should be borne in mind so as not to read too much or too little into this table.

As with the responses to the *Direct Cost Savings* measuring instrument, the 'Value of the training' survey, has drawn the highest improvement ratings, in terms of the greatest degree of savings, from discrete programs integrated with the specific agenda of the workplace (B3). This was particularly the case for supervisors.

A-type programs once again did not rate well.

Specific workplace skills

Complete job documentation

22% of training participants who answered this question stated that that they did not have this skill prior to the language and literacy inclusive training in their workplaces. After the training, 75% of this group stated that they could now complete their own documentation.

57% of all participant respondents considered that they already had this skill before the training, and 21% stated that this was not a part of their job.

☞*Case study No. 1: Johnson and Johnson Medical*

☞*Case study No. 2: St John of Kronstadt Russian Welfare Society*

Read job instructions

75% of participants considered that they could already read their job instructions and a further 12% stated that this was not a part of their job.

78% of the remainder claimed that they had acquired this skill as a result of the language and literacy inclusive training. The remaining 22% (only 3% of the entire respondent group) indicated that they still could not do this.

☞*Case study No. 4: Visy Board (WA) Pty. Ltd.*

Speak to members of management

Before the training, 72% considered they already did this. Interestingly, 11% considered that speaking to members of management was not a part of their job.

Of the remaining 42 respondents (18%), just over 61% said that they now did this.

Speak at team meetings

Only 56% of participants stated that they would speak at team meetings before the training had taken place. 13% said that this was not a part of their job.

Of those who considered that they did not do this before the training, (76 respondents), just under 60% stated that since the training they were now ready and able to speak at their team meetings.

☞ *Case study No. 4: Visy Board (WA) Pty Ltd*

Report problems to supervisor / team leader

An enormous 83% of respondents considered that they could already report problems to supervisors or team leaders before they had undergone the training. Of the remaining 41 respondents (17% of the total respondent group), 78% felt that they had gained this skill through their language and literacy inclusive training.

Of the 244 respondents on this issue, only 2 remained unable to do this after the training, while 7 (3%) considered this was not a part of their job.

Write messages for other people at work

This appears to have been the most significant in terms of numbers of training participants gaining the skill. Only 40% rated themselves as already having this skill before the training. After the training this figure jumped to 60%, while 17% considered they still could not write messages for others at work.

23% or nearly one in four respondents considered that this skill was not a part of their work.

Use telephone / two-way radio

60% already had this skill before training took place and 28% did not see it as part of their job. Of the remaining 29 respondents, 75% stated that they had gained this skill as a result of the training.

☞ *Case study No. 2: St John of Kronstadt Russian Welfare Society*

Fill out own workplace forms

75% of workers who considered they did not have this skill before the training state that they are now able to complete their own workplace forms (such as leave forms, accident report forms etc.).

64% of the total respondent group felt that they already had this skill before training, while 10% did not consider that it was part of their job. 7% remained unable to complete their own forms.

Use a calculator

39% of respondents did not consider the use of a calculator to be a part of their job. A further 49% did, and claimed that they could already use one for their work before the language and literacy (which includes numeracy) training.

Of the remaining 12%, just over half gained this skill through their training programs.

Section C:
The case studies

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The case studies

Although all 24 workplaces participating in this study were clearly convinced that the language and literacy inclusive training had had a beneficial effect on one or more aspects of the workplace, there were several which, for different reasons, drew the researchers' special attention. These workplaces have been included in this section, *The case studies.*

For some, the reason for their inclusion as a case study was that there was readily available empirical evidence generated by the workplace itself which indicated a direct, quantifiable and considerable impact of the training. In others, although the empirical evidence was lacking, the impact of the language and literacy inclusive training was no less clearly identifiable in qualitative terms. In still others, there is a mixture of evidence that points to a direct link between the training and workplace gains.

All of the workplaces in the study have at some time received either WELL[1] or FILLIP[2] funding. Their language and literacy training programs were in the majority of cases established, monitored and evaluated by tripartite consultative committees comprising management, training provider and union representatives.

The selected case studies cover several different industries and workplace types across all four States in the study, and also indicate a broad range of benefits that may accrue from language and literacy inclusive training.

[1] Workplace English Language and Literacy Program, DEETYA
[2] Food Industry Language and Literacy Initiative Program

The benefits include improvements in productivity, saved labour costs, saved jobs, improved workforce flexibility, improved worker participation in work teams and improved outcomes of other workplace training. In short, the case studies give a deeper, micro-cosmic view of the gains highlighted in the findings of the study.

What the case studies also serve to underline is the enormous benefit that necessarily accrues to the nation as a by-product of the development of individuals' skills to communicate and train. When an individual becomes able to access further training, or to take on different roles, or to participate more fully in the life of the workplace, there is an obvious corollary that not just the workplace and the economy but also the individual and society in general, have benefited.

Each of the case studies has been read by the relevant personnel in the particular workplace and clearance for publication has been obtained.

Case Study No. 1

Johnson and Johnson Medical

Researched by Judy Duffy and Marie Manidis
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (Pharmaceuticals)
Location	Metropolitan Area, North Ryde, NSW	**Size of workplace**	Large

Workforce profile

Management	24	**Supervisory**	18		
Office	64	**'Shopfloor'**	96		
Auxiliary	18			**Total workforce**	220

Program details

Type of program B3 - Discrete program integrated with specific workplace agenda

Dates of program 2/5/93 **to** 11/9/93

Program participant

Number 19

Background Mostly NESB **Gender** Mostly female

Average length of program for participants 100 hours +

Key influences in the workplac

1. Workforce restructuring
2. Introduction of new manufacturing process
3. Quality Assurance

Key effects of the language and literacy inclusive training

1. Direct cost savings
2. Promotion and job flexibility
3.
4.

Johnson and Johnson Medical
North Ryde, NSW

> *For us the big success was that [the language and literacy training] was integrated into what we were actually doing here and was very much process-related and tailored to our particular needs.*
>
> Sue Lawton, Employment Relations Manager

The context

The North Ryde site of Johnson & Johnson Medical factory is quietly grand. The reception area feels more like that of an airy, stylish hotel than the frontispiece of a manufacturing plant. One could be forgiven for thinking one had not got the right place.

The plant itself is responsible for the manufacture of, amongst other things, medical sutures - needle and thread arrangements used in tying off ligatures in various surgical procedures.

Until 1992, the team of roughly 30 workers in sutures had always worked under a supervisor, and, despite considerable hand-eye co-ordination skills, had little or no need to read and write on the job. As Sue Lawton, the Employment Relations Manager said,

"Traditionally, our operators didn't have to read their own process documentation. In other areas, they had been shown a task visually...and that's all they needed to know."

Then came *Labyrinth*, a new form of suture manufacturing process and product from the USA. Johnson and Johnson Medical at North Ryde tendered against an international field for the contract to be the sole manufacturer of the new product world-wide. They won. It was a great achievement, but then its implications for the workforce became a serious concern which needed to be addressed.

The traditional suture manufacturing section was to be down-sized to 20 people to make room for the *Labyrinth* process and ten people would have to be moved across. (*Labyrinth* would require a total of 20 workers, so Johnson and Johnson were working on the idea of recruiting ten from outside, and making up the rest with ten workers from the traditional suture manufacturing process). The new process, however, required a form of manufacturing which demanded Quality teamwork. That is, the *Labyrinth* workers would need to operate as a multi-skilled, autonomous workteam, where each member was able to carry out in-process Quality Assurance checks, and to record these on In-Process Quality (IPQ) documentation. As Lawton explained,

"Because with [Labyrinth], they needed not only to understand the process but also know the Quality Assurance checks that went with it, they really needed to know the detailed Standard Operating Procedure...and then be able to complete their Quality Assurance information and document it...whereas traditionally we had QA people who did all of that."

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How does language and literacy training have any relevance?

Most of the workers were NESB women. Occupational testing showed that several had very limited language skills, and others lacked adequate reading and writing skills. Without these fundamental communication skills, few (if any) of the current workforce would be able to transfer to the new manufacturing process. In short, their jobs were suddenly on the line.

However, Johnson and Johnson have a Credo which places great emphasis on the well-being of their employees. Sackings are unheard of; redundancies and lay-offs are avoided wherever possible.

As a result, Johnson and Johnson Medical decided to do whatever they could to help the suture workers make the transition to *Labyrinth* . This would also mean providing relevant language and literacy training so that, amongst other things, they could read the Standard Operating Procedures and complete the IPQ documentation. And time was of the essence. They had only three months before they had to decide who stayed and who would have to be replaced through outside recruitment.

Setting up the program

At meetings, the workers were informed that, because of the downsizing, 10 jobs would have to go in the traditional suture manufacturing section. To retain their jobs, those workers would have to undergo the *Labyrinth* training. The unions supported the move because they recognised that Johnson and Johnson was trying to save the workers' jobs. The fact that language and literacy training to support the workers would be provided and that the training would be run in work time also supported a full participation rate.

Johnson & Johnson Medical employed casual staff to maintain the traditional suture manufacturing operation while 19 of the permanent staff (16 NESB and 3 ESB, all women) underwent the training.

Course Details

Integration of the language and literacy skills program with the *Labyrinth* process was vital. The first step was therefore to have the language and literacy training provider trained with the first *Labyrinth* crew.

The language and literacy trainer worked closely with team leaders and the Manufacturing Manager in order to build up her knowledge of the various processes, and speedily developed a training program specifically focussed on the process documentation for *Labyrinth*.

Two groups at different language levels were then set up and the program was run on a team-teaching basis, the subject-matter trainers being drawn from the participants in the first crew training program.

Expected outcomes

The ultimate goal was to save all of the suture workers' jobs by giving them the skills they required to move into positions in the *Labyrinth* teams. The specific expected outcomes therefore were for participants to be able to:

- cope with the IPQ documentation to set standards
- read *Labyrinth* manufacturing specifications and procedural standards
- complete production documentation
- work as part of an autonomous team
- actively participate in consultative processes

Results

The training program was an emphatic success. All ten workers successfully made the transition to *Labyrinth*. Success was dependent upon the workers meeting the stringent US Quality standards. Similarly, the workers consistently met the batch approval targets set by the USA, and batch documentation was also being completed to the required standards. Had these standards not been met, the product could not have been put on the market and Johnson and Johnson would have had no choice but to replace its workers or lose the contract.

Although there are no official figures stating the precise impact in dollar terms on Johnson and Johnson, there is no doubt that the success of the training program paid for itself many times over.

Lawton offers the following as indicators of costs that have been saved:

- 1.5 QA Officers positions no longer needed ($40,000 per annum approx.)
- redundancy payments for laid-off workers avoided (an estimated minimum of $25,000 for each laid-off worker)
- recruitment and training costs for outside recruits avoided

On this latter point, Lawton states that 70-80 applicants were put through "fairly tough language and literacy testing" in order to find the ten she needed. Had the ten in-house recruits been unsuccessful, the costs of recruiting a further ten people from outside would have to be added. As she succinctly described the value of developing the existing workforce,

"It was like we were tapping into an unused resource."

Direct Cost Savings

Pat McLean, a participant in the original course, completed the *Direct Cost Savings* measuring instrument from the perspective of a team leader. McLean noted, (as did Production Manager, Peter Gambleton, and fellow team leader, Les Goodman) that significant savings had been made across the board.

In particular, McLean and Goodman both indicated that the language and literacy inclusive training participants no longer have to ask for someone else to explain written job orders. Between them, they estimate an average of 4 - 5 worker hours per day are saved. At a worker hourly pay rate of $13.50, this is a saving of over $300 per week in "unproductive" worker hours.

Again, both team leaders cited major improvements in the combined tasks of using a calculator, calculating quantities accurately, and entering the results on relevant process documents. An average of their two estimates equates to nearly 12 worker hours per day. On the same pay rate as above, this is a saving of almost $800 per week in "unproductive" worker hours.

Promotion and Job Flexibility

19 women started and successfully completed the *Labyrinth* training program. When asked about the changes in the participants that had occurred after the training, McLean and Goodman supplied the following figures to indicate the gains in worker flexibility.

	Before the training		Since the training	
	ESB	**NESB**	ESB	**NESB**
Number of workers who can readily be moved from one workplace task / role to another	0	**0**	3	**16**
Number of workers who can readily take on further responsibilities / duties in situations of need	2	**1**	3	**16**
Number of workers who can take on tasks which involve the use of reading and writing skills	3	**1**	3	**16**
Number of workers who can take on tasks which involve the use of verbal skills (such as using a 2-way, telephone, or giving instructions)	3	**7**	3	**16**
Number of cases where participants have successfully been redeployed to another task for a limited period	3	**1**	3	**16**

Both team leaders commented that language and literacy training did not do the job on its own, but had this not been integrated into the *Labyrinth* skills training, the improvements noted above would not have been possible.

The participants themselves, through their responses to the "value of the training" survey, corroborate what their team leaders have said.

In sum

The impact of the language and literacy inclusive training at Johnson and Johnson Medical has been quite dramatic. All parties consider that there is a direct link between that training and the saving of 10 jobs, the consolidation of a new manufacturing process, the maintenance and development of in-house expertise, the saving of thousands of dollars in salaries and redundancy pay-outs, the development of an autonomous team culture, and the elimination of much "unproductive" worker time.

But the impact is really even more than that. It is ongoing. With the jobs of the operators now safe, and their great achievement to buoy them, they have, in the process, become an active part of the workplace. As Lawton explained,

"Because the operators are now really understanding the SOP - before, they never used to read it - they're saying "Hey, this doesn't work" or "It's not logical" or "It doesn't make sense" or "Really, that's not the most effective way." So they have raised issues of "We should look at changing this". As a result, the team are now brainstorming the SOP with the Manufacturing Manager and have made variations and changes to that. The process of reviewing and changing the SOP and batch documentation is the retraining in itself, because they [the operators] now know it better than anyone else, and are committed to it because they have been involved in changing it."

◇

Sincere thanks to:

Sue Lawton, Employment Relations Manager
Peter Gambleton, Production Manager
Pat McLean, Team Leader
Les Goodman, Team Leader

Judy Duffy and Marie Manidis, Researchers

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Case Study No. 2

St John of Kronstadt Russian Welfare Society

Researched byTanya Wolkenberg and Linda Wyse
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Health and Community Services
Location	Metropolitan Area, Dandenong, VIC	**Size of workplace**	Medium

Workforce profile

Management	2	**Supervisory**	4		
Office	1	**'Shopfloor'**	65		
Auxiliary	0			**Total workforce**	72

Program details

Type of program B3 - Discrete program integrated with specific workplace agenda

Dates of program 1/8/94 **to** 1/12/94

Program participant

Number 11

Background Mostly NESB **Gender** Mostly female

Average length of program for participants 41 - 80 hours

Key influences in the workplac

1. Loss of government funding
2. Introduction of teams
3. Multi-skilling

Key effects of the language and literacy inclusive training

1. Increased government funding
2. Direct cost savings
3. Improved patient care
4.

St John of Kronstadt Russian Welfare Society
Dandenong, VIC

> *The funding is our biggest issue, and we've been trying to educate the staff. They've got to show me on paper what they're doing, and the Government inspectors, when they come in, they have to see. If [the inspectors] can see what we're doing from the documentation then we will get that funding for that resident. But if they're not convinced from that documentation that we're actually doing what we claim, then they'll say "Look, I'm sorry."*
>
> Sally Melgalvis, Director of Nursing

The context

Hugging a gently sloping, nail-clippered lawn in a peaceful backstreet of residential Dandenong sits the private nursing home of St John of Kronstadt. For forty years, St John has tended to the nursing and medical needs of many members of the area's Russian Orthodox community. It currently caters for just over 70 residents in its two distinct halves - the Nursing Home and the Hostel.

The residents come here not only because of their affiliation to the Russian Orthodox church but also because they, like all the staff, are Russian-speakers. Understanding and support in old age are essential to your sense of well-being, and so it's important that your care assistants speak the same language. Many of the staff are bi-lingual. Some have learned English after emigrating. Others, as is the case with Sophie Kozoolin, the Manager of Hostel Care Services, were born in Australia of Russian émigré parents. This, however, is more the case for the staff in the nursing home than in the hostel. The majority of the Hostel Care Assistants, until the training program, spoke little English, and read and wrote even less. And this, states Kozoolin, had created a huge problem on a daily basis since 1992.

As a private nursing home, St John of Kronstadt depends financially both on its paying residents and on Department of Human Services and Health funding. Since 1989, that funding has been provided patient-by-patient on the basis of a points system under the Personal Care Assistance (PCA) Scheme. The different aspects of care required by each resident are each rated on a four-tier scale ranging from "Hostel Care" to "Personal Care - High". Depending on the rating, a number of points is scored. All the scores for the patient are then totalled, and a corresponding allocation of funding is made. This all sounds simple enough, except for the fact for the last 3 years the Department has required some evidence supporting the claims made every six months.

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How does language and literacy training have any relevance?

The "evidence" is required in the form of documented reports written daily by the care assistants about each patient. The reports should indicate the degree and purpose of care given. Reporting in itself was not the major problem, say Kozoolin and Sally Melgalvis, Director of Nursing, Most care assistants completed them assiduously. The problems occurred when the 6-monthly funding appraisals brought with them a PCA Inspector who invariably could not read Russian.

Kozoolin would spend hours translating, and even so would never finish the job. The funding the hostel received was accordingly short of the mark.

At an Aged Care meeting that Melgalvis was attending, the Director of another Aged Care Hostel happened to mention the difference that the training they were receiving from a Melbourne-based language and literacy skills training provider was making to their operations. Melgalvis contacted the provider to discuss training possibilities. If the care assistants could be given English language training in the specific area of daily care-report writing, perhaps the problems could be alleviated and badly-needed, extra funding could be obtained? A submission for Workplace English Language and Literacy (WELL) program funding was drawn up, and funding came through in early 1994.

Setting up the program

Through awareness and information sessions, noticeboard memos and staff meetings, all St John staff were informed of the availability of language and literacy training. Participation was to be voluntary. Almost all the Hostel staff and some NESB domestic staff from the nursing home stepped forward. All volunteers were assessed and placed in one of three classes, which were run on the basis of two 2-hour classes per week for 15 weeks between August and December 1994.

Course Details

Group 1, which contained the domestic staff, focussed on workplace-related communication skills for their own specific area of duties, including admission forms, incident reporting, understanding eating and sleeping patterns, menus, and fire prevention and emergency awareness.

The curriculum for Groups 2 and 3 (containing the Russian-speaking Hostel Care Assistants) consisted of a combination of general language development activities related to day-to-day communication as well as specific communication activities related to workplace practices including workplace vocabulary development, incident reports, note-taking, oral reporting, negotiation skills.

The program also included the teaching of the specific language needed to understand medical directives and to complete government-funding-related documentation, in particular "Day by day" forms and Outcome Standards Documents.

Because this was the first formal workplace training of any kind that the participants had received, the program encompassed not only specific workplace language and literacy skills but also sought to give participants a better understanding of their own job responsibilities and of the establishment as a whole.

EVALUATION

Expected outcomes

As may be gathered from the preamble, the principal expected outcome of the training was that the Hostel Care Assistants would improve their English language and literacy skills sufficiently to start recording in English their comments on the running sheets and in the daily care books. Without this, there could be no significant improvement in the level of documentation which was necessary to support the claims for changing certain residents' classifications to higher Personal Care.

Another key expected outcome was that participants would become more at ease with using the telephone.

Major improvements in funding

The most striking impact of the language and literacy inclusive training in this workplace is the amount of increased funding that has been obtained. Melgalvis and Kozoolin concur on an estimated increase of somewhere between $4,000 and $5,000 per month.

The monthly funding statistics for the periods immediately preceding and following the training program bear this out. Beforehand, the hostel was attracting funding in the region of $18,500 per month. In the post-training period, this had jumped considerably to $23,000 per month (a 25% increase).

The data sheets on funding payments for the two periods also clearly indicate that eight residents altogether were reclassified from "Hostel Care" to "Personal Care", and five others were upgraded from "Personal Care Low" to either "PC Intermediate" or "PC High". As "Hostel Care" residents attract $3.45 per day in funding compared with "Personal Care" residents attracting $25.90 - $34.00, it is evident that the reclassifications account for the huge increase in funding.

Such reclassifications can only be effected if sufficient supporting documentation justifies the change. At St John of Kronstadt, the significant change in the documentation was that much of it was now being written in English as a direct result of the language and literacy inclusive training.

In mid-1995, the PCA Inspector from the Department of Human Services and Health read the documentation notes supporting the claims for funding. Although not all of it was in English, there was more than enough for the inspector to establish the validity of the claims. No translations were asked for.

In order to eliminate any other significant influences on the increased funding figures, this research study established that the number of residents over the period had remained constant at 38. Of these, 30 were the same residents in both periods. The table below gives the precise changes in resident classification that occurred between the month before the language and literacy training, and those of the same period one year later.

The slight changes in the make-up of the resident group over the period account for the apparent discrepancy between the number of classification changes shown on the funding sheets and the figures in the table.

Type of patient	April / May 1994	April / May 1995
Hostel Care Patients	17	11
Personal Care Low	10	19
Personal Care Intemediate	7	2
Personal Care High	4	6
TOTAL	38	38

Kozoolin stated that there had been other factors related to the improved documentation which may also have had some impact. These included other in-servicing in the nature of information required, and also the streamlining of certain reporting procedures where a daily care plan, for example in physiotherapy, would now be read by the care assistant and simply signed. Nevertheless, without the language and literacy inclusive training, Kozoolin feels that the care assistants would not have been able to carry out these language and literacy tasks in English.

On an annual basis, then, the improved documentation resulting directly from the effects of the language and literacy inclusive training program had improved the hostel's funding by well over $50,000.

As Kozoolin commented, *"The hostel now pays for itself."*

Direct cost savings

A major spin-off of the training participants' language gains was a direct cost saving on Kozoolin's and Melgalvis' time. Kozoolin estimates that before the training she would have to spend 3-4 hours per week translating documentation and reports written in Russian by the Hostel Care Assistants. This is no longer the case. She now estimates that she would need to spend less than an hour a week in such work. Now, *"when a doctor comes in, he just opens the notes and he*

can read what's going on. [I] don't have to stand there with the doctor and say, "Oh, this is what this says."

For Melgavis' part, she states that, *"70-80% of my time was spent doing things I shouldn't have to do. Like filling in their forms, and running over to the hostel when it wasn't necessary, or calling doctors for them."* This time wastage has now all but disappeared.

Both women agree that the change in the Hostel Care Assistants' attitude towards the use of telephones has had an enormous impact on the efficiency of the establishment. Before the language and literacy training, it was a very common occurrence for the Hostel Care Assistants to cross from one side of the complex to the other in order to take messages or ask for help. There was an almost universal avoidance of the internal telephone system. This had several negative impacts on the workplace:

- patients would not receive the speediest attention
- Kozoolin and Melgalvis would be drawn away from their normal work to make telephone calls for doctors and / or ambulances
- Care Assistants would be spending their own time inefficiently, which would negatively impact on the quality of service to the residents

Since the language and literacy inclusive training, however, this has changed considerably. Melgalvis and Kozoolin report that "many" will now use the telephone and will, when necessary, call for an ambulance or doctor directly, explaining the situation in English. The positive ramifications for residents, assistants, management and outside services are extensive. Both Melgalvis and Kozoolin say that they now have time to do the work they should be doing, which is dealing with the residents and their problems more quickly, and in developing in-service training for staff in important areas of care assistance.

In sum

The impact of the language and literacy inclusive training on this workplace has been both specific and broad. Both the Director of Nursing and the Manager of Hostel Care Services are in no doubt that there is a direct link between the training and the vastly improved funding that the hostel now receives, due to better documentation in English. The reduced draw on their time as a result of improved documentation in English and the use of telephones by the Hostel Care Assistants has resulted in an improved service to residents by all concerned.

This, in turn, has meant that the staff will receive more training. This training will be delivered in plain English, and the staff are now more ready to take on the training.

During interviews, Melgalvis and Kozoolin both mentioned that several of the participants had begun to "regress" back into writing in Russian, because there had been no funding for training to be continued in 1995. They both hoped that 1996 would bring better news in this regard. For them, communication is a central part of their industry. As Melgalvis put it,

> *"Once you understand how the industry works, our comments about how important the training was to us make more sense. The area is constantly*

changing in terms of government guidelines. The documentation was the biggest thing they've introduced. For us, the English lessons have definitely been the starting point for all of our improvements. It's not like a factory; it's a people service and so it's unpredictable. That means you have to be flexible, and be able to communicate verbally and in writing. Otherwise the communication system breaks down."

Special thanks to:

Sally Melgalvis, Director of Nursing
Sophie Kozoolin, Manager of Hostel Care Services
Tanya Wolkenberg & Linda Wyse, Researchers

Case Study No. 3

Bridgestone Australia (Automotive Components Division) Pty Ltd

Researched by Robert Bean
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (Automotive)
Location	Metropolitan Area, Edwardstown, SA	**Size of workplace**	Large

Workforce profile

Management	18	**Supervisory**	30		
Office	40	**'Shopfloor'**	600		
Auxiliary	0			**Total workforce**	700

Program details

Type of program C - Language and literacy consistently integrated into all mainstream training

Dates of program 1/4/80 **to** 1/12/96

Program participant

Number 100

Background Mostly NESB **Gender** Roughly equal mix

Average length of program for participants 100 hours +

Key influences in the workplac

1. Award restructuring
2. Self-managed workteams
3. Competency-based training system

Key effects of the language and literacy inclusive training

1. Creation of a training climate
2. Access to and acceptability of further training
3. Participation in meetings
4. Promotion and job flexibility

Bridgestone Australia Ltd Automotive Components Division
Edwardstown, SA

> *There's absolutely no doubt that our training effort from 1990 onwards would have been seriously hampered if we had not had the language and literacy program in place in the years leading up to it.*
>
> Darrel Richardson, Manufacturing Manager

The context

In the longitudinal stakes of workplace language and literacy training, Bridgestone Australia Ltd Automotive Components Division, in Adelaide's Edwardstown, ranks in the big league. It has been involved in some way or another with this type of training for more than 15 years and in the process has enabled the development of a training climate which is the envy of many others in their industry.

One of Australia's leading manufacturers of rubber / plastic-based automotive parts, from window seals to steering wheels, Bridgestone Automotive has been working since 1982 towards developing a workteam structure on the shopfloor. Starting from the introduction of Quality Circles in the 1980s, its focus in the '90s has been on developing self-managed workteams on the shopfloor.

The company has taken an holistic approach to developing the new kind of working environment in which Bridgestone Automotive's 600 workers would become as much the shopfloor's daily decision-makers as front-line management. This has brought with it not only the workteam concept, but also the usual concomitants: Quality Assurance systems, consultative processes, and Occupational Health and Safety awareness. In short, over the last 5-10 years, Bridgestone Automotive has been a scene of great change.

Not only has Bridgestone Automotive's development of the workforce been long-term, but so has the make-up of the workforce. The vast majority of workers (65% NESB, 35% ESB) have been with the company for more than 5 years, most for as long as 10 years, and recruitment since 1990 has been virtually non-existent. But why all the change?

The company sees as its critical success factors:

- Cost competitiveness in international markets
- Quality products
- Improvement in safety
- Career-path development and teams

The bottom line in all of these things is inextricably linked to getting the most productive, efficient, flexible and consistent performance from the workforce. This, in the management's opinion, meant introducing the self-managed workteam approach. Bridgestone Automotive's understanding of its critical success factors brought with it a clear recognition that the workforce would require on-going training in the various concepts which underpinned those factors. Failure to do this would necessarily mean failure to respond most effectively to the demands of their critical success factors and, in short, failure to remain at the top of its industry.

As Manufacturing Manager, Darrel Richardson explained,

> *"Cost is our biggest Key Performance Indicator... We don't believe that the old systems could ever give us enough cost reduction to allow us to remain in business. And that's been a major push in our formation of self-managed workteams. How much self management can do will depend on how much responsibility they can accept. And none of that will work without the appropriate training."*

How does language and literacy training have any relevance?

It was in fact before this great period of change had really taken hold that Bridgestone Automotive first became involved with workplace language and literacy training. In 1980, they were approached by a local training provider offering such training. At that time, Bridgestone Automotive's major influence and focus was improving safety through the implementation of a safety training program. With a large percentage of NESB workers in its workforce, language was a barrier. It was through this starting program that the company became more aware of the need to address the language and literacy issue in the workplace, if all of its by then developing plans were to be implementable. It became clear that, although not the only issue of importance to success, without language and literacy skills support training for both NESB and ESB workers, none of the planned changes to the way the workforce worked could be successful, and the necessary change to a training culture would be seriously undermined.

For various reasons, not the least of which was the mid-80s economic recession, the language and literacy training program suffered a certain amount of inertia through its first six years at Bridgestone Automotive. There didn't seem to be the degree of benefit from the training that the workplace had considered it might get and at times it was hard to remain convinced of its value to the workplace. Nevertheless, the program survived these trials and from 1987 picked up new momentum with the then new concept of integrated language and literacy training. The program started to take as its focus the language and literacy skills which were required for workers to operate effectively within the Total Quality Control system and Quality Circles which had been set up. The programs covered the skills related to being effective communicators in team meetings, dealing with intercultural clashes, taking minutes, and discussing problems and solutions. Safety also remained a focus.

In 1990, a Training Resource Centre was also set up at the Edwardstown plant. It was made available to all workers, but was used primarily for workplace language and literacy skills training and as a support for other workplace training. Discrete, integrated training programs continued to occur at the plant.

In 1992, Bridgestone Automotive's training program momentum gained two further large booster shots when Competency-Based Training was formally put on the agenda and the self-managed workteams structure was also formally introduced. These two key influences have led to the development of a CBT plan which plots career training paths for all Bridgestone Automotive employees.

Total Integration

The training structure developed by the Bridgestone Automotive Training Section shows a complete integration of language and literacy skills into all areas of workplace training. This alone indicates the value Bridgestone Automotive places on language and literacy skills development in enabling the establishment of a training culture.

Figure 1 shows a skeletal outline of the CBT training structure.

	Communication	Quality	OHS	Rubber / Plastics Technology
Stage II	Stage II competencies	Stage II competencies	Stage II competencies	Stage II competencies
Stage I	Stage I competencies	Stage I competencies	Stage I competencies	Stage I competencies
Language and Literacy (Advanced)				
Language and Literacy (Intermediate)				
Language and Literacy (Basic)				

Figure 1: Bridgestone Automotive CBT Training Plan Framework

The plan itself shows what might be loosely termed a 'preliminary stage' to training which allows for solid language and literacy skills training before entering Stage 1. However, as separate from the training plan as this may appear, the focus of this 'preliminary' stage is squarely focussed on the general prerequisites in Stage 1 across all four streams (Communications, Quality, OHS, and Rubber / Plastics Technology). That is, the 'preliminary' stage is something akin to a discrete program which has nevertheless been integrated with the specific requirements of the workplace in terms of language and literacy skill competencies.

Beyond this 'preliminary' stage, Stages 1 and 2 between them constitute the competencies required to gain the Bridgestone Production Certificate (for which national accreditation was being sought at the time of writing this case study). The Bridgestone Production Certificate is a

hybrid, containing modules of the nationally accredited Engineering Production Certificate and the Polymer Processing Certificate, which together have a much greater relevance to the work of Bridgestone Automotive employees. Indeed, as Josie Cirocco, Bridgestone Automotive's Training Co-ordinator pointed out,

> *"Some of Bridgestone's engineers are at the forefront of their field in the industry - i.e. they set the content for the [Polymer Processing] Certificate."*

As far as language and literacy skills are concerned, nationally accredited modules of the two certificates are included which contain communications competencies directly linked to the demands of the certificates' other skills competencies.

At the 'preliminary' levels, Cirocco stated that ESB involvement was minimal. Individual training appointments with these workers to deal with particular weaknesses is the principal means of responding to their needs. The main thrust of the language and literacy training is currently dealing with Basic NESB participants, with a strong emphasis on oral skills for team meetings. Written skills are also important for charting processes associated with the Quality Control systems, and these also require numeracy skills development in some cases.

The training plan is still being developed and will not be fully operational until mid-1996.

EVALUATION

Expected outcomes

It is practically impossible to talk in terms of expected outcomes for a workplace which has been involved in a whole line of language and literacy inclusive training programs for 15 years, without referring to each program in turn. This would be made all the more difficult if we were to try to look at the expected outcomes of language and literacy training which is now so comprehensively integrated into all of the workplace's mainstream training.

It is therefore perhaps more expedient to talk here in terms of overall reasons for becoming involved in such training programs, and then to look at what the results have been in relation to these.

As has already been mentioned, the key reasons were:

1. to improve communication generally
2. to improve safety
3. to enhance the outcomes of workplace initiatives such as:
    - self-managed workteam systems
    - Total Quality Control systems
4. to give access to career paths through the CBT Training Plan

In sum, the key long-term expected outcome was the development of a new culture of workplace improvement with training as one of its central tenets.

In an attempt to indicate the broadest range of measurement or commentary on the gains of the workplace, Bridgestone Automotive staff answered all four of the projects measuring instrument documents - one of only two workplaces in the project to do this. The results from the four are presented here.

Direct cost savings

When this research team approached Bridgestone Automotive for an indication of the *Direct Cost Savings* to the company of the language and literacy training that had occurred, Josie Cirocco wrote to us explaining that,

> *"...it is difficult to characterise the nature of savings and the amount of savings for our division because our training needs have changed and increased progressively over time due to changes in our dynamic working environment and industry."*

Cirocco added, however, that although empirical measurement was not possible,

> *"Overall, the improvements which we have as a result of trainees participation in language, literacy and numeracy skills include the following:*
>
> - *actively participating in meetings*
> - *use of multi-language skills during team meetings*
> - *charting responsibilities of SMWTs[1] (i.e. housekeeping, productivity, scrap, customer returns, injury performance, attendance and health and safety)*
> - *awareness of OH&S issues".*

Although not substantiated by statistical evidence, Cirocco, Richardson and Trevor Stevens (Employee Relations Manager) between them identified 17 specific workplace skills[2] which in their opinion had led to better than 'minor' savings due to the language and literacy training.

In summarising, Richardson said,

> *"Our labour unit costs have gone down. Our Accident Frequency Rate has gone down. People are participating more. I can't isolate how much of that to attribute to language training as opposed to other training we've had, but it's obviously had an impact.*

He was also keen to point out the changes in attitudes which had occurred amongst those who had previously held the traditionally shorter-term view on productivity.

[1] Self-managed workteams
[2] A copy of the instrument may be found in the Appendices to Volume II.

> *"Before, our management and supervisors said, "When people are in training, they won't be able to catch up, productivity will go down." All that's been proven to be incorrect. Now we continue with our training unabated. Our self-managed workteams take an hour each week to get together and talk and work out what they're going to do the following week. All of this would have been classified as 'unproductive time' in the '80s and would have showed up. Now, we don't even bother to record it. All we're interested in is the number of good parts out in relation to the people in the workforce, and that's going up."*

What Richardson is in fact outlining here is that the culture of the workforce has changed in a fundamental way. It has not changed in its primary need to increase productivity - far from it. But it has changed in the way it sees it should achieve that productivity increase - through workplace reform. And, as previously noted, this has required the development of a training climate established initially by the introduction of language and literacy training. Although the link may not seem immediately obvious, without the language and literacy inclusive training, the whole foundation of the edifice is seriously flawed because success depends fundamentally on the involvement of every member of the workforce.

Participation in Meetings

With regard to the responses to the questions on worker participation in meetings, the most significant recorded gain was that, on average, several workers had improved in their attitude towards and behaviour in team meetings. The average improvement was two points on a four-point scale. This means that previously disinterested workers were now 'showing interest and actively participating occasionally', and those who had already shown interest were now 'actively participating regularly' in the meetings.

On the skills front, the responses were mixed, with two supervisors considering there had been considerable improvements in the team's performance as a whole on a number of issues: focussing of team discussions, understanding meeting procedures, and team spirit. The other two respondents however were more reserved in their judgements, considering that there had only been minor gains in these and other areas, such as the understanding of and use of problem-solving instruments.

When asked whether there were any other influences which could have had a bearing on these results, the responses varied considerably on different issues. This may best be explained by the fact that each respondent was answering for a different team or teams. There was no one issue on which they were unanimous.

Access to and acceptability of further training

As far as further training is concerned, there have been significant gains according to two supervisors and one production manager who completed the measuring instrument document. Responses indicated that, because of the training, there had been significant improvement in the areas of increased in-house expertise, workforce flexibility, reduction in accidents, a reduction in

lead times and delays, and an improvement in meeting productivity targets. A telling statistic here, which obviously cannot be linked solely to the language and literacy training programs, was given by one supervisor. He indicated that the workforce has been halved in the last five years yet productivity is now back to previous levels. The respondent who made this comment, when pressed to explain the link with the language and literacy training, considered that all of the changes that had occurred had done so due to the new Quality and workforce management systems. These, however, had only been successfully applied because of workers' understanding of their importance. Training in this understanding would have been unattainable by a large proportion of the workforce because of the language barriers.

The same supervisor gave estimates of his own team of 45 workers who had gained from the language and literacy inclusive training. They are summarised on the following table.

	Before training	Since training
Number of workers able to read information on available training courses	20	40
Number able to apply for training courses	25-30	45
Number willing to apply for courses	5	20-30

Figure 2: Access to and Acceptability of Training : One Bridgestone Automotive Workteam

The attitudinal change in the last row of the table is as significant to the effective operation of the workforce as are the basic reading and writing skills gained (represented in the first two rows). Without the willingness to use skills, the skills gained lose at least half of their potent force.

The same supervisor commented that:

> *"ELT [English language training] has enabled me to rotate the whole section [of 45 workers] with great success. Prior to ELT, people stayed in the same jib, and would not move.'*

An extra benefit that this provides this particular supervisor with is a flexible team of workers who have fewer accidents because their stints in particular sections of the team are now limited. With less opportunity for boredom to set in and therefore the possibility of concentration lapses, safety levels are much higher.

A final set of statistics under this heading comes from an interview conducted by the researcher with nine of the training participants. They were all asked the same three questions. Their

answers indicate clearly the importance of language and literacy skills in accessing and succeeding in other training.

Seven of the nine considered that the language and literacy training had helped them to access further training. None of them said they would definitely have applied for further training without having had the language and literacy training, and six of them felt that they would not have done. Five of the nine consider that, without the language and literacy training, they would not have completed the further training program they are now on, and three others were hesitant about their chances.

Promotion and job flexibility

On the subject of worker flexibility, Richardson was clear in his perception of the gains.

> *"In the 1980s, we employed a lot of NESB people. Giving them increased language skills has resulted in increased flexibility. By cross-training people - which is hard to do without good English language skills - we're now more able to cover the functions of any worker, when training demands take them away from the job."*

Richardson's comments are also borne out in the comment of one supervisor made while completing the research instrument which examined this issue. The supervisor stated that between 10 and 12 out of 60 workers in his section of the workplace had gained promotion over the previous eight years. What is most significant about this statistic is that all of the promotions were of NESB workers who joined Bridgestone Automotive in an era when communication skills were not key criteria for getting a job.

The gains which have occurred in this area appear once more to have accrued from the development of a training culture within the workplace. Such a culture, as we have seen, may only be effectively developed if all workers are included. Inclusion has been ensured over the years, firstly by the early stand-alone language and literacy programs, then by more specifically integrated training, and finally by the systematic inclusion of language and literacy skills development in all workplace training. The resultant impact is not only more flexible workers, but also that workers who have the skills and the enthusiasm are also given access to promotional opportunities.

In sum

Over the 15 years of Bridgestone Automotive's association with language and literacy skills training, the company has passed through three distinct developmental stages, from the stand-alone language and literacy programs of the 1980s to the discrete integrated workplace specific programs of the early 90s to today's CBT Training Plan where there is consistent integration of relevant language and literacy skills into all mainstream training. This has occurred in parallel and, for much of the latter half, in tandem with the cultural change in the workplace in terms of shifting from a traditional, hierarchical structure of responsibility and management to the flatter, consultative structure of self-managed workteams working within a TQC system. In the process,

its value has become less and less clearly identifiable, because, in this workplace, it has become too intimately related with a broad range of other variables which affect workplace improvements

Changing the workplace culture has not been an easy process nor is it yet completed. It has involved the need to embark upon a great deal of training in new working concepts that has touched every member of the shopfloor workforce. Indeed, without the success of the training, much of what Bridgestone Automotive has achieved over the last five years in particular would not have been possible. Perhaps the most telling influence of the language and literacy training which has occurred is not, in this instance, the improved completion of documents, or the greater understanding of meeting procedures, or reading of memos, or helping valued workers to gain promotion. Although all of these things are of course indispensable to the workplace, perhaps the greatest influence has been the role that language and literacy training has played in developing the workplace's training culture. For without the language and literacy training, much if not all of the other 'culture shift' training would have foundered. This is not surmise. Darrel Richardson, Bridgestone Automotive's Manufacturing Manager considered that:

> *"What we have done in the past five years would have been impossible without the language and literacy training."*

This sentiment is echoed in the comment by Chris Field, the ALHMWU[3] Organiser, who said,

> *"If CBT had been introduced from 1989, less than 10% of the workforce would have understood."*

Though not the sole instrument of change, language and literacy training has been an indispensable, long-term tool in helping to bring about the new Bridgestone Automotive culture.

◊

Special thanks to:

Darrel Richardson, Manufacturing Manager
Josie Cirocco, Training Co-ordinator
Trevor Stevens, Employee Relations Manager
Chris Field, ALHMWU Organiser
James Nicholson, Production Manager
Ian Bristow, Supervisor
Yana Kovacevic, Supervisor
Robert Bean, Researcher

[3] Australian Liquor, Hospitality and Miscellaneous Workers' Union

Case Study No. 4

Visy Board (WA) Pty Ltd

Researched and written by
Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (Printing)
Location	Metropolitan Area, O'Connor, WA	**Size of workplace**	Large

Workforce profile

Management	6	**Supervisory**	7		
Office	10	**'Shopfloor'**	75		
Auxiliary	16			**Total workforce**	114

Program details

Type of program B3 - Discrete program integrated with specific workplace agenda

Dates of program 3/4/95 **to** 1/12/95

Program participant

Number 32

Background Roughly equal mix **Gender** Mostly male

Average length of program for participants 40 - 80 hours

Key influences in the workplac

1. Workforce restructuring
2. Introduction of work teams
3. Introduction of new technology

Key effects of the language and literacy inclusive training

1. Increased Productivity
2. Participation in meetings
3.
4.

Visy Board (WA) Pty. Ltd.
O'Connor, WA

> *He may not have made a mistake for three years, and then he could have made one tomorrow. A mistake could mean thousands of cartons are wasted. Anything you can do to reduce that risk is worth doing.*
>
> Peter Allen, State General Manager

The context

Visy Board (WA) Pty. Ltd. is the West Australian arm of the national company of the same name which in turn is part of the Pratt Industries group. Visy Board's core business is the on-site manufacturing of corrugated cardboard, almost exclusively from recycled paper. The board is then used to produce a large range of packaging products including cartons and box dividers (such as are used to separate bottles in cartons of wine).

Over the last 18 months, the O'Connor plant has seen the introduction of millions of dollars worth of new technology, most of which is computer-driven. During the same period, Visy Board has been re-implementing Value Adding Management (VAM) workteams at the workplace. An attempt to introduce the VAM team concept had occurred two years earlier, but had foundered due to insufficient people in the workplace receiving formal training in the basic VAM concepts. VAM is a workteam-based system which requires workers from discreet areas of the workplace to meet on a regular basis to identify problems in their section, to search for solutions to those problems, and to set deadlines for implementing solutions.

How does language and literacy training have any relevance?

Visy Board (WA) Pty. Ltd. first became involved with integrated language and literacy training in 1995 through the WELL Program. State General manager, Peter Allen, had a key interest in ensuring that the VAM teams could operate at an optimum level, unhindered by communication skills problems. He was also keen to address the issue of the communication, numeracy, and computer skills required to operate in the newly created technological environment.

To this end, the training provider carried out a Communication Skills Analysis of the whole workplace. The subsequent report identified the communication skills that all workers would require to operate effectively within their VAM workteams and with the new technology. It also highlighted areas in which workplace communication in general was lacking or inefficient or ineffective.

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Setting up the program

The company, unions and training provider agreed that integrated language and literacy training would be offered to the whole workforce on a voluntary basis. This tripartite group then jointly addressed the whole workforce at two meetings (one for each shift). 32 volunteers (roughly 40% of the shopfloor workforce and representing all plant areas) were interviewed and their language, literacy, and numeracy skills were assessed. Participants were then grouped according to need. It happened that the workers to be trained were by and large not involved in the direct use of the computer-driven technology and so the subsequent training focussed primarily on the VAM team requirements.

Course Details

There were three courses run at Visy Board: one English as a Second Language (ESL) class with 14 participants; one Literacy class with 8 participants; and one mathematics class with 7 participants. These each ran at 2 x 2 hours per week for ten weeks. A second phase of classes was run for a further ten weeks. Several additional volunteers appeared for this second phase.

The classes were timetabled to straddle the shift changeover so that workers from different shifts could attend classes relevant to their needs. This meant that the participants were required to attend for one hour in their own time paid at an overtime rate. Worker involvement and attendance was not affected by this fact.

In all three cases, the principal aim was to equip the participants with the relevant VAM team operating and meeting skills. These included an understanding and use of problem-identification and problem-solving tools such as fish bone charts (called CEDAC charts in this workplace) and Quick Changeover charts, meeting procedures, questioning, clarifying, note-taking, and memo writing. Specific participants' workplace needs were also addressed on an *ad hoc* basis.

The courses were therefore designed to respond to these specific workplace needs and to do this while taking participants' current levels and needs as the departure point. The courses ran unhindered. Thanks to the commitment of the workplace and especially that of the Production Foreman, participants were almost invariably able to attend.

EVALUATION

Expected outcomes

The expected outcomes of this training program, according to the General Manager and Production Foreman, were:

1. improved worker involvement in VAM teams
2. improved productivity and efficiency of training participants
3. improved communication on the shopfloor

Major increase in productivity - a machine operator's story

Duc was an operator of one of the finishing machines at the Visy Board plant. The finishing machines take the corrugated cardboard which the on-site corrugator has produced and turn it into any of a whole range of cardboard packaging products. Each job is different and has a new, computer-generated job sheet outlining customer details, dimensions, die codes, printing details, quantities required etc. Since January 1995, a diagram of the finished product has also featured on the reverse side of the job sheet.

As a finishing-machine operator, Duc was responsible for the running of the machine and for directing his machine crew of three other workers. Reading the job sheet accurately and comprehensibly is essential to the successful and efficient completion of any job. To get any of it wrong may mean major rework, major wastage of materials, major delays in getting out other orders.

Through discussions, initially with Bob Goddard, the Production Foreman at the plant, it became clear that Duc was considered to have been the training participant who had most benefitted from the training. Goddard (and also members of Duc's crew) commented on his markedly improved pronunciation which made communication that much easier. Duc also commented that he felt considerably better in this regard, and as a result, everyone considered that the crew operated more effectively and efficiently. Despite these important gains (and their importance will later be recognised as even greater), in terms of productivity, a much more significant change had occurred in the machine operator.

Although not a specific aim of the language and literacy training curriculum, reading the job sheet had always caused Duc problems. Specifically, during the training program he sought the teacher's help with:

- job sheet vocabulary he did not understand
- deciphering other people's hand-writing (it transpires that the job-sheet is often modified or added to by various members of the workplace after it has left the computer-printer)

A further problem was that sometimes the data on the sheet was contradictory. For example, the cardboard in storage for the particular job may be twice as much as the quantity required according to the job sheet.

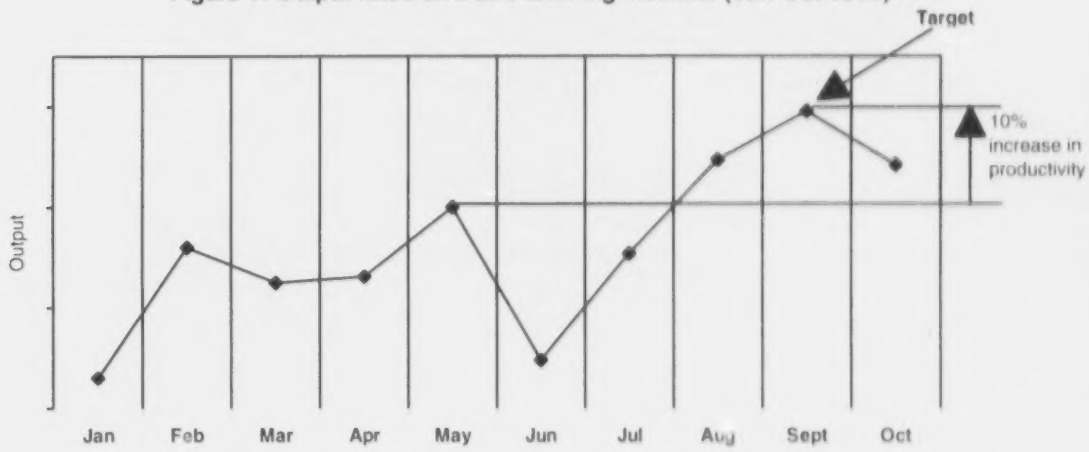
Before the training, Duc's problems with the job sheet understandably led him to seek out help from the foreman on a regular basis. Goddard conservatively estimates that the machine operator would therefore spend 20 minutes a day seeking clarification on job order-related matters. These figures were confirmed by an independent estimate given by Duc himself. Unfortunately, because few people could easily understand Duc's heavy Vietnamese accent, using the phone was not an option he readily chose. His only option was to speak to the foreman in person, which was both inefficient for Duc himself and a draw on Goddard's time.

By the end of the training, however, a remarkable change had occurred. Because of the direct intervention of the language and literacy trainer, Duc's job-sheet vocabulary and hand-writing deciphering problems had disappeared. And what is more, because of intensive work on his

pronunciation, Duc's accent clarified to such an extent that the telephone became a viable option. In terms of reduced downtime for the machine and increased output, the figures are significant.

Warren Westney, Operations Manager, provided this research project with statistics for Duc's machine for the 10-month period from January to October 1995. Figure 1 indicates the average hourly output per shift over that period. For reasons of confidentiality, it is Visy Board's policy not to publish precise production figures. The scale on the vertical axis has therefore been removed.

Figure 1: Output rates on Duc's finishing machine (Jan-Oct 1995)



The language and literacy training program ran from 6 April to 31 August. During this time, the hourly output per shift from Duc's machine on the graph shows a clear overall increase, especially in the second half of the language and literacy training period.

When asked whether there had been any other influences which may account for the increase, the General Manager, Peter Allen, indicated that in the May, a new automated feeder and a new stacker had been added to the machine with the specific goal of increasing the machine's output. The additions meant that, where in the past one or two crew members would have needed to manually feed the board into the machine, this was now all done at the press of a button. The stacker at the other end, by more reliably removing the unwanted cut-offs, ensured a 'cleaner' product and therefore increased overall output. The graph shows quite clearly that, at the point when these two additions to the machine were made, there was a considerable drop in output. Allen explained that this was due primarily to teething problems. It had always been the aim, however, to improve the machine's output to the target mark. By September, the teething problems were over and the 10% improvement in productivity had materialised.

So why is any of the increase due to the language and literacy inclusive training? Isn't it all due to the new feeder and stacker? Allen is quite clear on this. Of the 20 minutes Duc used to spend checking out the jobsheet with the foreman, Allen considers half would have been in planned downtime anyway. That is, while Duc was away seeking clarification, the rest of the crew would have been removing the die and the stereo (inking imprint) from the previous run and therefore there was no loss of production time. However, Allen stated that the times for "set-ups" recorded in the log for Duc's machine show an average reduction of two minutes. On an average of five set-ups per shift, this accounts for the other ten minutes. Allen indicated that

> *"the improvements in output that came from adding the feeder and stacker cannot account for the improvements in set-up time - they only come into play once the machine is running."*

In essence then, Duc's machine had increased its output by close to 10%. By calculating what ten minutes extra production time would mean in output, 20% of the increased output can be directly attributed to the language and literacy training Duc received. In a word, the training had been directly responsible for a 2% increase in the overall productivity of that one machine.

To eliminate any other influencing factors, a check was run on Duc's sick days - he'd taken none all year. And he had been the only machine operator for the day shift on that machine for the entire period. He had also always worked with the same crew. Only at the beginning of October was there a crew change, and Goddard considered that, to some extent, this may have caused the slight dip in output noted for that month. He also stated that, apart from ink codes being introduced onto the job sheet in May / June, there had been no other changes in the job sheet during the relevant period.

When Duc himself was questioned separately about how he had changed since the language and literacy training program, he confirmed everything that management had said. He was convinced of where one of the major causes of improvements lay:

> *"For this year, production always go up. Literacy is the key for open the door."*

Participation in teams and meetings

Duc's case, as impressive as it is, should not be allowed to overshadow the other key effect that the language and literacy training had on this workplace. The training had, after all, been set up in the first place to improve the efficiency of the VAM teams.

Before the training, Goddard, who was also the VAM Facilitator at the time, considered that many of the training participants lacked team-meeting skills. In fact, so much store was being set by the language and literacy training program to improve matters that the fortnightly meetings of the two VAM teams from which many of the training participants were drawn were actually postponed while the training program was on. The results were, however, worth the wait.

Asked to comment on the VAM team members' abilities with regard to a set of seven team-meeting skills[1], Goddard had rated as unsatisfactory before the training every aspect bar one for one of the teams, and only four of the seven as satisfactory for the other. By the end of the training, however, things had changed considerably. Goddard rated general participation, team spirit, focussing of team discussions, and the use of the CEDAC charts as 'much improved'. Only minute-taking skills[2] rated as 'unchanged', the other two skills rating as 'somewhat improved'.

[1] The skills are listed in the appropriate section of the *Statistical Overview*.
[2] This team meeting skill was consistently rated as less improved than others by all respondent workplaces. See *Section B: The findings*.

Goddard was also asked to observe nine individual VAM team members (language and literacy participants) for the first four VAM team meetings immediately following the training. Because there had not been any VAM team meetings since the beginning of the language and literacy training, Goddard was able to give them a pre-training rating before they restarted their meetings. On a four-point scale Goddard rated each of the nine.

The pre-training ratings for the nine were:

Number of team members	Rating
0	1 = actively participated on more than one occasion
1	2 = showed interest and actively participated on one occasion
5	3 = showed interest but did not actively participate
3	4 = showed no interest

For various reasons, observations were only carried out during the first three post-training VAM meetings. However, the ratings in this post language and literacy training period were:

Number of team members	Rating
4	1 = actively participated on more than one occasion
1	2 = showed interest and actively participated on one occasion
4	3 = showed interest but did not actively participate
0	4 = showed no interest

An independent observer's ratings of the same people at the same meetings confirm Goddard's perceptions.

The value to the workplace of the change here should not be underestimated. With the workplace's stated purpose as being to involve the workforce actively in the identification and solution of production and efficiency problems, the key forum for this activity is the VAM meeting. To move from a situation where eight of the nine observed workers did not actively participate in the team meetings to one where this number has been reduced to four, and where

all of the participants are now at least showing interest, is surely central to Visy Board's goal. To have also created amongst those same nine, four who now regularly actively participate is indication enough of the importance of language and literacy training to give workers the skills with which to participate.

To Goddard, the gains are obvious. He states that there have been several suggestions of modifications to machinery which have come from people who couldn't have expressed the ideas before.

In sum

Visy Board has gained in many ways from the language and literacy inclusive training. From the elimination of one individual's apparently minor skill deficiencies - an inability to interpret a job sheet and speak clearly into a telephone - they have wrought thousands of dollars in increased production. From that same source, they have also saved hundreds of dollars in 'unproductive' labour costs each week.

From the development of VAM team meeting skills and personal confidence in their workers, they have also gained suggestions for machinery improvements which they might never otherwise have gained. And although practical and empirically measurable gains from these suggestions are as yet unknown, they now have a body of workers who are not only able, but also willing to participate in the workplace's goal of creating autonomous work teams. These less tangible gains of team work and participation are no less significant.

Perhaps as important as anything else, this workplace is also in a position to start gaining from the far less tangible benefits of co-operation, team work, and participation. As Goddard said of the training program:

> *"It's brought the cultures together. Those people were calling these people names and vice versa. We are now able to swap and change our people [round] and they get on. The machines are therefore more productive. Before they wouldn't talk to each other. Now they do."*

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Special thanks to:

Peter Allen, Visy Board (WA) Pty Ltd, State General Manager
Warren Westney, Operations Manager
Bob Goddard, Production Foreman
Maxine Tomlin, Enterprise-based teacher

Case Study No. 5

Civil & Civic / Lend Lease Interiors

Researched by Judy Duffy and Marie Manidis
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Construction
Location	Metropolitan Area, Sydney, NSW	**Size of workplace**	Large

Workforce profile

Management	300	**Supervisory**	80		
Office	40	**'Shopfloor'**	125		
Auxiliary	0			**Total workforce**	545

Program details

Type of program B5 - Combination of discrete programs integrated with workplace needs and industry standards

Dates of program 1/5/93 **to** 1/6/95

Program participant

Number 20

Background Roughly equal mix **Gender** Mostly male

Average length of program for participants 40 hours or less

Key influences in the workplac

1. Need for industry-wide approach to training
2. Award restructuring and multi-skilling
3. Safety

Key effects of the language and literacy inclusive training

1. Cost / benefit analysis
2. Direct cost savings
3. Promotion
4. Job flexibility

Civil & Civic / Lend Lease Interiors
Sydney, NSW

> *If you invest $1,000 now in a person that improves their performance by 1%, and that change in performance remains with that person for the next 10 years, you've got, if you take inflation into account, a pretty big benefit. Whereas if you invest $1,000 and the guy either doesn't use the skill or uses it for only that project and never again, the benefit is quite small. So for long-term skills like communication skills, the benefits are big, because they're the skills that underpin everything else you do.*
>
> Kevin Farrell, NSW State Training Manager

The context

The cylindrical, city centre tower in which its headquarters are housed seems far removed from the daily reality of construction site life. Yet, for Civil and Civic / Lend Lease Interiors, one of the NSW construction industry's largest companies, this separation of workplaces is unavoidable in an industry whose workforce is forced to live a nomadic existence.

Unlike most other industries, in the construction industry the worksite is not a fixed place. Whereas factories, hospitals, hotels, government departments have 'permanent' worksites with largely fixed workforces, construction companies constantly move around, and the workforce is highly transitory. On any given building project, the actual work may be carried out by dozens of different subcontractors, or 'subbies'. Although the project is run by one major construction company, the entire workforce 'belongs' to no one in particular.

As the work provided by a particular 'subbie' becomes necessary, so those workers arrive on the scene. Their presence may be for as much as a year or more. For the majority, however, it is more likely to be a question of weeks, or only days. To boot, there is a strict order in which the 'subbies' must complete their work - windows cannot go in before walls are built. If a delay occurs in one stage of construction, the next will almost certainly need to be delayed. Accurate prediction of who will be where when is something only the naïve expect.

Periods of unemployment for construction workers can also be significant. When there are few construction sites, or there are delays, many construction workers find themselves without work. It can be an on-again-off-again existence.

Then there is the question of safety. Although Civil and Civic does not directly employ many of the people working on its sites, it still owes all such workers a Duty of Care by law. If safety regulations are not understood and adhered to, at the end of the day, Civil and Civic, as the major contractor, may be as much to blame as the 'subbie' involved. And when an accident requires a compensation claim that sends the latter into liquidation, it is the major contractor who will as often as not be required to 'pick up the tab'.

In addition to this, the construction industry of the 1990s with Award Restructuring and the removal of former job demarcations has seen the need to develop a multi-skilled workforce which could be organised into self-managed workteams.

The implications for training of all these interconnected facets are enormous. The issue of lack of continuity alone presents huge problems in providing workplace-based training. Training programs which in other industries can be spaced out over several months are unlikely to succeed. Even those which are very short-term and on-the-job may still be disrupted by the intrinsic volatility and unpredictability of this particular industrial scene.

If we add to this the fact that the workforce does not work for a single employer, then co-ordination of training across the industry becomes a major necessity and a huge logistical problem.

Civil and Civic, therefore, considered that the pressing issue of industry training required an industry-wide approach. Just as no one construction company can operate in isolation, the issue of training could not be dealt with by one company in isolation either.

As Kevin Farrell, Civil and Civic's NSW Training Manager, outlined in a 1995 document entitled *Skills Assessment in the Construction Industry - A Pipe Dream?*:

> *"The past five years have seen a lot of philosophical talk about a skills-based pay system. [However], ..., the industry has not seen widespread adoption of the concept, and now many are wondering if it will ever really happen. Civil & Civic / Lend Lease Interiors decided not to wait for the industry to develop something on their behalf. It dived in boots-and-all."*

That was in 1992. Three years later the result has been the development of a skills-based system born out of the Award Restructuring process and underpinned by Civil and Civic's Joint Development Agreement (JDA). This is a form of Enterprise Agreement whereby improvements in productivity, efficiency, and safety and the removal of demarcations would be counter-balanced by, among other things, the provision of industry training and career paths.

The essential elements of the skills-based system are presented in Table 1.

In essence, it is a competency framework that supports skills development of the NSW construction industry's workforce. With its endorsement by the major construction companies, it also provides any credentials gained through the system with a portability across the major contractors. At the time of writing this case study, monitoring of the Civil and Civic Matrices and criteria against those in the other enterprises and also against the demands of a national system was still occurring.

How does language and literacy training have any relevance?

It is Civil and Civic's philosophy to encourage all workers to participate in their own skills development. They are also included in their own on-going skills assessments which on average occur twice a year for each construction worker.

Agreed framework	• Skills Matrix - levels 1 to 5 • Skills Matrix - levels 5 to 9 • Assessment Criteria levels 1 to 9 • Assessment Reviews • Administration system
Participative Processes	• Continual improvement via consultation • Performance Appraisals
Challenging Work Organisation	• A culture of learning and improvement
Resources	• Skills Assessors • Learning Resources • Dedicated resource (manager)
Rewards & Recognition	• Skills Passport • Endorsement by Major Contractors[1] • Agreed Remuneration

Table 1: Principal elements in Civil and Civic skills-based system

With a large and culturally diverse workforce whose language and literacy levels were considered to be very low, language and literacy training was generally perceived to be a priority both in enabling access to other training and in providing additional workplace language and literacy skills for those requiring them in their changing workplace.

One example, which Farrell cited to illustrate the need, concerns a formwork[2] company. Many subcontractors have mono-lingual NESB workforces, including the manager; in this case, the language is Croatian. There is only one worker, the foreman, in the company who can speak English. If for any reason that person is off-site, communication with the company is impossible and loss of time, and all its ramifications, result.

Farrell also cited another significant need for language and literacy training which would influence the future of parts of the industry. Many of the mono-lingual NESB companies specialise in particular skills - concrete finish and placement, terrazzo, rendering. Because of a lack of English language skills and the aging nature of such companies' workforces, Farrell believes there is a distinct possibility that such skills will be lost to the industry. He considers that, because of the language barriers, young ESB workers cannot learn the skills and there are no apprenticeships or traineeships available in most of these specialist areas. Furthermore, many of the ethnic groups represented in such companies come from countries which are no longer key sources of migrants to Australia. The fear is that, as the current workers age and retire, the skills-base in the industry in such specialist areas will be irrevocably eroded.

[1] Multiplex Construction Pty. Ltd., Concrete Construction Pty. Ltd., Fletcher Construction Australia Limited, John Holland Construction Pty. Ltd., Baulderstone Hornibrook Construction Pty. Ltd., Lend Lease Interiors Construction Pty. Ltd., Civil & Civic Pty. Ltd.

[2] Formwork is a process of constructing floors. Areas of wooden panels are constructed onto which concrete is poured. When the concrete has hardened, the wooden formwork is removed.

With this as the industrial and Civil and Civic backdrop, we can now turn our attention to the specific site considered by this case study.

The Olympic 2000 Site

The construction project at Homebush Bay was a part of Sydney's bid to host the 2000 Olympic Games, and involved the designing and building of the Sydney International Athletic and Aquatic Centres, and associated infrastructure. The project was managed by Civil and Civic and involved work by around 120 sub-contractors. The project had a peak workforce of about 400 people, but due to the nature of construction work, many thousands of workers contributed to the project directly. 85 of Civil and Civic's own workforce were involved in the work at the site.

Lend Lease Learning Pty. Ltd., an internal consultant to Civil and Civic / Lend Lease Interiors, established a Learning Resource Centre at the Olympic Site. Its purpose was to provide training expertise and resources for those who worked on the site. In the event, it provided formal, class-based training as well as training through other flexible delivery modes.

Setting up the program

In May 1993, a program of integrated language and literacy training was conducted on sites in the Sydney CBD, and particularly at the Olympic 2000 Project site.

Funded by the Workplace English Language and Literacy Program, the training provider placed an Enterprise-based teacher (EBT) with Civil and Civic for five days per week which were spent at the Olympic Site. Over the 12-month period, there were more than 40 participants in the language and literacy inclusive training program.

Initially, the particular participants, although all volunteers and mostly construction workers, had been specifically targeted. The General Foreman and other foremen were used as prime influencers to encourage a particular set of Lend Lease workers and subcontractors to participate. However, as the project progressed, an increasing number of site personnel including engineers, foremen, office personnel and the General Foreman also took part in language and literacy skills training.

Course Details

The training they received varied according to their specific needs, but was focussed on two key issues initially:

- Civil and Civic's commitment to EEO principles
- Occupational Health and Safety for subcontractors

One-to-one and group training was organised to help the participants with computer-based literacy, workplace documentation and report-writing. The EBT also set up a system of mentors

/ coaches who were first given training by the EBT before moving on to help fellow workers. Formal classes for the site personnel were also run in cross-cultural awareness and Plain English.

EVALUATION

Expected outcomes

Farrell freely admits that the company's earliest expectations of seeing great improvements in workers' language and literacy skills were unrealistic. He commented,

> *"We really had no idea, at the outset, of how hard it was and how long term that would be for part time participants."*

From this, it is clear that no prior dollar-value benefit had been attached to the training. It was felt, as was the case with most of the workplaces in this study, that the gains would outweigh the costs. Farrell emphasised the importance the training provider and the EBT played in broadening his understanding of the issues as the year progressed, but at the start, the assumption was very much that the training would improve communication skills generally at the site.

Cost / Benefit Analysis

There were, of course, those in the company who needed to be convinced of the validity of Farrell's assumption, and that any improvements would justify the expense.

Partly in response to this, Farrell embarked (as part of his personal studies) on a trial cost / benefit analysis of all the training that had occurred at the site from May 1993 - 1994.

Using a Wilson Learning Corporation measuring instrument called *A Return on Investment Model for Evaluating Training* (1991), Farrell examined the various training programs run at the Olympic 2000 site. The programs included:

- Arc Welding Program
- Language and Literacy Program
- OHS&E[3] Program
- Olympics Project (a large, complex, on-the-job learning program)
- Workplace Reform Initiative

Essentially, the instrument consists of seven 'worksheets'. Together they are used to calculate an estimate of the training's cost-benefit to the company. The first six worksheets cover:

1. Training cost estimate
2. Duration of the training effect
3. Training effectiveness

[3] Occupational Health, Safety and Environment

4. Performance range
5. Performance differences between trained and untrained employees
6. Dollar value of the job

The seventh worksheet takes values, which have been systematically developed through the answers to the previous sheets, and uses them to establish a final benefit / return on investment.

The documentation which accompanies the model indicates that users of the model might be surprised by the final figure. However,

> *"...through more exact, controlled testing, others have found similarly sized, bottom-line benefits from training."*[4]

Farrell administered the instrument to four respondents at the site - the Site, Safety, IR, and Learning Managers. Farrell *was* surprised by the size of the final figures which were similarly enormous for each of the training programs investigated by the model. The figure for the benefit / return on investment for the language and literacy training was $4.75 million.

However, despite various anomalies and mismatches between the perceptions of the respondents and the way those perceptions could be recorded by the model, the four respondents considered the figure to be a realistic estimate of the gains. As Farrell wrote in his report,

> *"This [language and literacy] program, by any measure, has been widely accepted as successful. Since this [program] underpins most other skills learned, it was expected that a large benefit would result. The consistently high result [across all four respondents] confirms this view."*

Farrell's concluding remarks in the study indicate that the instrument could become a standard at Civil and Civic. However, the model as trialled was deemed to be too generic as it stood and would need to be adjusted to make allowances for the specific nature of the work of the company.

Direct cost savings

In support of what does appear, on the face of it, to be an astronomically high claim of return on investment, the respondents to this present research project were able to identify specific cost savings which they readily attributed to the language and literacy training program.

After the language and literacy training program, John Carfi, Site Administration Manager at the Olympics 2000 site was able to implement a computer-based data system operated by construction workers which tallied the amount of money billed to subcontractors. Because the data was entered into the computer, reliable and accurate record keeping was now possible. As a direct result, money which previously was not usually recovered on Civil and Civic's crane costs

[4] *A Return on Investment Model for Evaluating Training*, Wilson Learning Corporation 1991, Page 15.

suddenly could be. At the Olympic site alone, $60,000 (25% of the crane costs) was saved. It should be pointed out that the computer had in fact been on site well before the language and literacy program had occurred but because the foremen lacked basic computer literacy and keyboarding skills, it had barely been used.

This figure of course considers the costs saved at only the Olympic site. The continued use of computer skills for this purpose alone, of course, has the potential to save Civil and Civic enormous amounts of money for every future project where those same foremen are employed.

Another supervisor, responding as a language and literacy inclusive training participant, cited weekly savings accruing from the program as set out below:

Skill surveyed	Nature of saving	Amount of saving
completing workplace documents generally (on computer)	time saved, greater efficiency and higher quality	1 hour per day at $16 per hour **$80 per week***
reporting problems in writing	Do reports myself without involving others	30 hours per week at $1500 per week salary (Top manager's time) **$1,125 per week***
writing minutes of meetings	briefer, write bullet points	30-60 minutes per week at $13 per hour **$10 per week***
communicating clearly with other team members	**writing more logically, more direct language**	2 hours per week at $13 per hour **$26 per week***
	TOTAL	**$1,241 per week***

Table 2: estimated direct cost savings (supervisor)

Similar figures estimated by three other supervisors corroborate those given in the table.

At another of Civil and Civic's sites - Fairfax - which was also covered by the EBT, the savings are similarly appreciable. As with the crane costs, General Foreman, Peter Bennett, has also a computerised record of monies recovered from subcontractors for forklift work totalling $15,000. Without this accurate computer-based documentation, he estimated that a maximum of only $5000 would have been recovered.

* estimated

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It is obvious that language and literacy skills training alone would not have yielded such results. The significance is in its integration with specific workplace skills training, which together have led to the savings. And although an exact percentage cannot be attributed to the 'language and literacy factor' in the training, it is quite clear that without that factor, the training would have been seriously affected, if not rendered useless.

Promotion

In Farrell's report on skills assessment[5], tables are provided showing the movement of Civil and Civic construction workers in terms of their employment levels. Based on these tables, Farrell was able to state that amongst the 20 employees involved in the language and literacy inclusive training at Civil and Civic sites, seven (six ESB, one NESB) workers had successfully applied for promotion since the training. In the preceding 12 month period, although all 20 were eligible for promotion, there had been no successful applications. Promotion, under the skills-based system described earlier, is based on the attainment of skills in the next employment level. These are accessible partly through training. Farrell considered that the language and literacy inclusive training had enabled the attainment of those skills.

Asked about the value to the workplace of the ability to promote internally, Farrell commented,

> *"[Internal promotion] is done for industrial relations reasons. Our Enterprise Agreement values continuity of employment. Internal employees have a very strong loyalty to the company, [and] because internal applicants understand the culture, [there is] less conflict."*

The loyalty stems not inconsiderably from the fact that all Civil and Civic employees are also shareholders in the company. They therefore have a vested interest in ensuring that the company operates as smoothly as possible. However, if internal promotion is not possible because of lack of skills, the only option is to recruit from outside.

When asked about the costs of this, the answer was quite unequivocal. Recruitment costs are approximately $5,000 per position. But the loyalty (which is not a part of such recruitment),

> *"...could be valued at hundreds of thousands of dollars."*

Job flexibility

On the job flexibility front, the gains have also been appreciable. A compilation of the figures from four respondents concerning the 20 participants at the Olympic 2000 site indicates a marked increase in worker flexibility. The figures are presented in Table 3.

They show the respondents consider that language and literacy inclusive training has enabled the workplace to use workers' skills more effectively and to broaden the roles and tasks that workers

[5] *Skills Assessment in the Construction Industry - A Pipe Dream?*, K.Farrell, August 1995

may be asked to perform. The figures also highlight that, in language and literacy skill based tasks particularly, the gains were made amongst the NESB participants. Six of the seven ESB workers could already take on many such tasks. The ESB gains were more significant in the broadening of their skills base. As we have seen earlier, this has involved the use of computers.

There are of course no quantifiable measurements available to indicate the value to the workplace of these changes in worker flexibility. But to Civil and Civic, the value is intrinsic to their goals of developing a more highly skilled and flexible workforce that is able to learn on a continuous basis. In that very significant sense, even if there *were* measurements in dollar terms, the value to the workplace is much more than money alone could say.

	Before the training		After the training		Total improvement
	ESB	**NESB**	**ESB**	**NESB**	
Number of participants who can readily be moved from one workplace task / role to another	**1**	**0**	**7**	**13**	**19**
Number of participants who can readily take on further responsibilities / duties in situations of need	**1**	**1**	**7**	**13**	**18**
Number of participants who can take on tasks which involve the use of reading and writing skills	**6**	**1**	**6**	**4**	**3**
Number of participants who can take on tasks which involve the use of verbal skills	**6**	**1**	**6**	**2**	**1**
Number of cases where participants have successfully been redeployed to another task for a limited period	**1**	**0**	**1**	**1**	**1**
TOTAL	**15**	**3**	**27**	**33**	**42**

Table 2: Improvements in job flexibility

In sum

The nature of the construction industry and its workforce is unique, and its uniqueness poses particular problems in the area of training. However, Civil and Civic have been able to work together with their employees and the CFMEU[6] to develop a skills-based system that at least provides a framework for development and recognition of industry-related skills in its own and other 'shared' workforces.

It is also obvious that the training that has been run has been highly successful. Whether measured in cost-benefit terms by the Return on Investment Model, which indicated benefits running into millions of dollars, or on the individual supervisors' and managers' estimated cost savings, which talked more in the tens-of-thousands range, or indeed measured on the indications of improvements in internal promotion and worker flexibility, the impact of the language and literacy inclusive training on Civil and Civic / Lend Lease Interiors has been substantial.

[6] Construction, Forestry, Mining and Energy Union

To claim that all of the gains are down to language and literacy skills development alone would be untenable. Frankly, it would also be missing the point. The gains occurred because of the *inclusion* of language and literacy skills development in the on-site training. Without their inclusion, the rest of the training would not have reached those who lacked the training-related language and literacy skills implicitly required for success. To use an industry-based metaphor, the language and literacy skills element in the whole training program is perhaps comparable to the water in the concrete mix - when it's there, you don't see it. When it isn't, the concrete crumbles.

◊

Special thanks to:

Kevin Farrell, Civil and Civic, NSW Training Manager
Peter Bennett, Civil and Civic, General Foreman
John Carfi, Site Civil and Civic, Administration Manager
Shane Hunt, Civil and Civic, Foreman
Laze Kelepurovski, Site Engineer
John Pincini, Civil and Civic, Quantity Surveyor
Danny Potocki, Civil and Civic, Foreman
Carlos da Silva, Civil and Civic, Construction Worker
Allison Trengove, Civil and Civic, Site Administrator

Judy Duffy and Marie Manidis, Researchers

Case Study No. 6

Haigh's Pty Ltd

Researched by Robert Bean
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (Food)
Location	Metropolitan Area, Adelaide, SA	**Size of workplace**	Small

Workforce profile

Management	2	**Supervisory**	1		
Office	1	**'Shopfloor'**	22		
Auxiliary	0			**Total workforce**	26

Program details

Type of program B2 - Integrated Literacy, ESL, Numeracy with National Certificate in Food Processing; Plain English for Supervisors

Dates of program 1/5/94 **to** 1/12/95

Program participant

Number 5

Background Mostly NESB **Gender** Mostly female

Average length of program for participants 66 hours

Key influences in the workplac

1. Quality accreditation being sought
2. Introduction of workteam structure
3.

Key effects of the language and literacy inclusive training

1. Development of Communication Policy
2. Direct cost savings
3. Improved access to further training
4.

Haigh's Pty. Ltd.
Parkside, SA

> *It's very hard to change the culture of a workforce that's been used to being told what to do. I think some of [the participants] still won't speak up freely, but at least if you ask them, they'll now have the confidence to talk to you, whereas before they'd just shrug their shoulders and say, "No problems".*
>
> Alister Haigh, General Manager

The context

The rich, faintly bitter aroma of freshly worked chocolate greets the nostrils as you enter this Adelaide factory, the smallest of the 24 workplaces involved in the research project.

Haigh's has been producing hand-made chocolates since 1915 when it started as a family business. Today, the company is still run by family members, Alister and Simon Haigh, and, with a total workforce of just 26 people, produces chocolates exclusively for its own Australian retail outlets - currently five in Adelaide and three in Melbourne - and increasingly for export.

Acutely aware of the need to keep the balance between high output and Haigh's tradition of hand-made goods (one of the company's key differences with competitors), the company has been working towards gaining Quality accreditation, moving over to a workteam structure on the shopfloor, and implementing multi-skilling. The management's over-riding philosophy is to empower the workforce rather than to supervise them.

The creation of such a workforce depends, of course, on creating a climate of confidence: confidence to accept new roles, confidence to work with change, and confidence to learn.

How does language and literacy training have any relevance?

Management realised at the outset that the achievement of their goals for workplace reform would be seriously undermined if any members of the workforce could not participate because they lacked the fundamental communication skills required for success.

For example, Quality Accreditation at Haigh's means:

- carrying out quality assurance checks,
- reading detailed specifications,
- calculating production figures,
- completing batch production documentation,
- reading and complying with standardised procedures,

- taking responsibility for their work, and
- being effective in the decision-making process to maintain set quality standards.

Team work and multiskilling imply that all of these communication skills are required of all members of the team, regardless of the roles they happen to be taking on any particular day.

It was clear to management that, although the practical skills of the workforce were basically fine, there was no career path for the workers and this in itself acted as a barrier to the creation of a learning organisation with an independent workforce. With 25% of employees having been with the company for twenty years or more (the average is eight years), resistance to change through training was always likely to prove considerable.

When funding became available for language and literacy training through the Food Industry Language and Literacy Initiative Program (FILLIP), the company was keen to use this as a tool to provide extra impetus to the other initiatives in the workplace.

Setting up the program

A Survey of Communication Structures and Training Needs was carried out by the training provider to identify workplace language and literacy needs. The language and literacy training program was promoted to the whole workforce through information sessions given by the training provider at section meetings on the shopfloor. Being such a small workplace, only five participants could be spared from the shopfloor at any one time. Four workers volunteered; a fifth, identified by management as in need of such training, was encouraged through a discussion with the training provider to join the program. She agreed.

The five participants were then interviewed to assess their language, literacy and numeracy levels. The results showed vastly disparate levels, but, Haigh's being a small business, there was no option but to put all five into one training group. In consequence, the training provider then adopted current principles of flexible delivery.

Perhaps not surprisingly, it was the relative newcomers to the workplace who took up the challenge. At first, there was a sense of resentment amongst co-workers towards the five participants who were seen as having two hours per week paid for no work. However, the co-workers slowly began to realise that the participants, when at work, were taking on more on their own and were communicating better. Coupled with a change in the training's timetable, so that participants had to give an hour of their own time, this saw the levels of resentment drop.

Course Details

A pilot course ran in 1994 for 10 weeks on a basis of 2 x 2 hours per week. The curriculum was designed to meet the specific needs both of the workplace and the trainees. Based on themes, it focussed on the trainees' jobs, the production process, workplace forms and texts, and problems at work. In 1995, on recommendation from the training provider and in line with the company's own push for the inclusion of industry-accredited competencies, a second program was run based

more specifically on certain competencies in the Hygiene and Sanitation core module from the National Food Processing Certificate. This course was still in progress when this case study was drawn up (end 1995).

A Plain English workshop program was also implemented in February 1995 for team leaders, three of whom worked with the five language and literacy trainees. The purpose of this program was to help those responsible for devising forms and communicating in writing to workers to do so in a more reader-friendly manner.

During the period of the program, Haigh's also developed, with the help of the training provider, a company Communication Policy which placed effective communication amongst the key issues on the workplace reform agenda for the foreseeable future. The policy was based on four key principles:

1. Industrial and workplace reform places increased communication demands on all personnel in all sectors of the Food Processing Industry;

2. Communication is the key to a safe, effective and productive workplace;

3. The continuing development of communication skills is relevant to all occupational groupings and levels within different sectors of the Food Processing Industry; and

4. Literacy, English language and numeracy skills are integral aspects of workplace training

The policy's goals, objectives, strategies and outcomes are detailed under five performance areas.

- Communication style and practices;
- Cross-cultural communication;
- Literacy, English language and numeracy training;
- Team work; and
- Workplace change and industrial change.

Without going into the details here of the individual goals, strategies and outcomes, the overall thrust of the policy document is to encourage the development of a working environment where all workers are not only officially encouraged to participate in the workplace decision-making processes, but are also formally equipped with the skills. It also includes clear statements that the policies apply to management just as much as they do to the shopfloor, and that the ultimate goal is to enact any strategy which helps to create a communicative, learning environment.

EVALUATION

Expected outcomes

Through an initial interview with the General Manager, this research project established the following as expected outcomes of this training program:

1. workers would be more productive
2. workers would work more independently
3. workers would participate more in consultative processes

As was the case with most of the workplaces involved in this project, however, there were no formal measures or mechanisms put in place before the training took place to gauge the achievement of these outcomes. Nor were there any workplace-generated statistics available to indicate the degree of achievement of these goals as a result of the language and literacy training.

Nevertheless, a quantitative evaluation of the impact of the training on this workplace was possible to a certain extent through the application of the following measuring instruments developed for this research project:

- direct cost savings
- access to and acceptability of further training

Direct cost savings

David Healey, Haigh's Production Team Co-ordinator, completed the *Direct Cost Savings* measuring instrument, and indicated in general that the language and literacy inclusive training had led to minor savings in workers' workplace reading and writing skills generally. The savings were generally expressed in terms of time, and totalled an estimated 3 worker hours per week. In respect of completion of QC documentation, there were fewer errors committed after the training which Healey estimated at a $20 per week saving.

Healey indicated that the most significant savings had occurred in the area of workers' understanding of verbal instructions. He said that since the training, there had been fewer mistakes and he estimated the amount of time saved to be about two hours worker production time per week.

A rough totalling of all the savings, based on an hourly rate of $15.00, would equate to an estimated saving of $95 per week. Over a whole year, this would be just under $5,000. However, Haigh's were unable to state what impact this time-saving has had on output because there were "*too many other influences and variables*".

In terms of the Haigh's Communication Policy, however, the result is significant. Healey's comments reveal that the policy is already achieving some of its stated goals with improvements noted in communication skills required for workplace participation. This is further emphasised in the following section.

Access to and acceptability of further training

Each of the four participants who still work at the factory successfully completed the Hygiene and Sanitation A Module of the National Certificate in Food Processing. This, Healey states, has provided him with a slightly improved in-house availability of relevant expertise which he rates very highly. Workforce flexibility and the factory's ability to meet projected productivity targets have also slightly improved since the language and literacy training, in his opinion, but unfortunately there are no official statistics available to corroborate this. Despite the lack of figures, however, Healey cites as specific gains:

1. *the participants' improved ability to clearly understand the job requirements in terms of hygiene and sanitation; and*
2. *an improvement in team morale and the building of a cohesive workforce*

Both of these clearly indicate the achievement of goals as set out in the company's Communication Policy.

Other spin-offs from the training have been the participants' ability and readiness to take on further training. All four, according to Healey, are now willing and able to apply for other training, whereas before the language and literacy inclusive training, only one of them was even able to read the information on available training courses.

This opinion is borne out by responses from three of the participants themselves. They all considered that the language and literacy inclusive training had:

- definitely helped them access further training
- encouraged (2) or enabled (1) them to apply for further training
- given them the skills to successfully complete the further training

In sum

The relationship between the perceived gains at Haigh's and the company's Communication Policy should not be understated.

Firstly, it should be remembered that one of the key results of the training program and the resultant contact with the language and literacy training provider was the development of the Communication Policy in the first place. Secondly, the policy was put in place to help create a workforce which the management believe will work more effectively and produce a better quality product at competitive prices. Any movement towards the attainment of the goals of the policy

must therefore be considered as a movement towards the ultimate aim of developing that more productive workplace. Finally, in producing an official Communication Policy, Haigh's management was also showing that it was committed to such training, to the development of all team members, and to the need for change to stay ahead of competition. It is in this way that the gains described should be viewed.

Therefore, although this case study does not afford a great deal in terms of direct and measurable gains from the language and literacy inclusive training that has gone on, the gains are there, even if, for the moment, they are perhaps more at the qualitative end of the measurement continuum. It may be some time before the effect of the training and the implementation of other strategies under the Communication Policy really begin to have quantifiable effects.

In the meantime, perhaps Alister Haigh's own comment best summarises the most obvious example of the value of the language and literacy inclusive training to date:

"If they're more independent, they're not taking up someone else's time."

◊

Special thanks to:

- **Alister Haigh, General Manager**
- **David Healey, Production Team Co-ordinator**

- **Robert Bean, Researcher**

Case Study No. 7

Victorian Hide and Skin Producers

Researched by Tanya Wolkenberg and Linda Wyse
Written by Geoff Pearson with contributions by Geoff Towns

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (TCF)
Location	Metropolitan Area, Laverton North, VIC	**Size of workplace**	Large

Workforce profile

Management	5	**Supervisory**	7		
Office	22	**'Shopfloor'**	82		
Auxiliary	0			**Total workforce**	116

Program details

Type of program B2 - Discrete program integrated with industry certificate

Dates of program 1/5/95 **to** 1/12/95

Program participant

Number 20

Background Mostly NESB **Gender** Mostly male

Average length of program for participants 80 - 100 hours

Key influences in the workplac

1. Workforce restructuring
2. Introduction of TQM system
3. Expansion of manufacturing processes

Key effects of the language and literacy inclusive training

1. Reduction in downtime
2. Reduction in maintenance costs
3. Improved outcomes of workplace training
4. Better shopfloor communication

Victorian Hide & Skin Producers Pty. Ltd.
Laverton North, VIC

> *"Our downtime on the drums has dropped by nearly 50% since the program started [in April 1995], and 60% of that can be directly attributed to the language and literacy training given to the fleshing team."*
>
> Geoff Towns, Company Secretary

The context

The acridly pungent cocktail of cattle hides and chemicals mixing in various stages of a tanning process might not be everybody's idea of the most delightful aroma, but for Victorian Hide and Skin Producers, it is a cocktail with the sweet smell of success about it. In a matter of six years, VHSP, in western Melbourne's Laverton North, has gone from a hide-salting and trading business to being the largest, single 'wet blue' leather manufacturing plant in Australia. With their product bound primarily for the export market, the immediate future is one of plans for further development.

'Wet blue' is an intermediate stage of leather-making which makes the hide both heat-stable and non-putrescible[1]. Over 95% of all finished leather produced uses 'wet blue' as an intermediate stage. In essence, the 'wet blue' leather process consists of three stages. Firstly, the hides are trimmed and 'fleshed' - that is, the fat and connective tissue is removed from the hide. The hides are then tumbled in huge tanning drums where chemical reagents are added to penetrate the hides. When they are removed, the hides are wet and have turned a smoky blue colour - hence the name. The hides are finally passed through a sammier, which removes and recovers much of the moisture content. At the moment, the hides leave the plant at this stage.

Not surprisingly, the rate of development of the company and its core business has required a significant amount of workplace reform. The usual concomitants are present: the introduction of a TQM program, restructuring of the workforce into workteams, job classifications becoming skills-based, establishment of career paths, and - ahead of market demands - a commitment to gaining International Standards accreditation.

The company, however, also has a largely stable workforce whose profile reflects the norm for much of the Textile Clothing and Footwear industry - the majority of workers come from non-English-speaking backgrounds.

[1] will not turn putrid or rot

How does language and literacy training have any relevance?

As reported in a 1994/5 case study of this workplace[2],

> *Training [had] become very important at VHS. In addition to Quality management training, workers have participated in Occupational Health and Safety, Forklift, Leather Technician, First Aid, and Chemical Handling. As this training progressed, management became more aware that the majority of workers did not understand the training content.*

Although not the sole issue, it was obvious to management that improving the language and literacy skills of the current workforce was a key element in successfully implementing the new workplace culture and its accompanying training programs. The workplace also recognised that, because of communication problems, workers' other skills and knowledge could not be fully used.

Setting up the program

With funding from the WELL program, a local training provider was engaged in 1994 to run a language and literacy skills development program. Run in worktime over 32 weeks, at three hours per week, the program deliberately targeted a small group of team leaders. Participation was on a voluntary basis. This group was targeted for such training to prepare the participants for roles assigned to them under the TQM program. As the company hoped, it also helped allay fears amongst the rest of the workforce about the nature of the training. Company Secretary, Geoff Towns, commented:

> *"[For] the first lot of training, we had to encourage the workers [to participate], but for the second lot, we were swamped. We actually had to turn people away.*

Encouraged by the results of the initial program, and in the interim having learned more about the necessity for workplace input into the content of such training, VHSP submitted for further WELL funding. The successful submission saw the company procure an Enterprise-based teacher for three days per week.

A more integrated approach[3]

[2] *Making a case: Six case studies of language and literacy provision in TCF companies*, Australian Textile Clothing and Footwear Industry Training Board, Feb. 1995

[3] Geoff Towns, the Company Secretary, very kindly offered to write up the detail of the programs and his own evaluations for this case study. The remainder of the case study is therefore a combination of his work and other relevant information gathered by the researchers involved.

In 1995, therefore, the language and literacy training moved from the previous stand-alone, general language and literacy model to a much more integrated approach where the content of the courses would be directly related to the most pressing needs of both the workplace and the participants.

The Enterprise-based teacher model of workplace language and literacy training in any workplace affords a mucher broader array of delivery methods and types of training. Thus, at VHSP too, the training has varied. There has been some one-to-one teaching, and there have been specific group-based training programs. Training has focussed on OH&S, workplace numeracy, identification of machinery parts and the identification of maintenance requirements, and computer operation.

With the specific purpose of this research in mind, Towns focussed the researcher's attention on two specific language and literacy inclusive training 'projects', both of which concerned the work of the "fleshers" and both of which he considered would yield empirically measurable results in terms of impact on the workplace. Namely, a reduction in maintenance costs and a reduction in downtime due to drum stoppages.

PROJECT ONE

Training program: The training of flesher operators to undertake basic maintenance tasks

Goal: to reduce maintenance costs

Towns explained that it was a workplace goal to reduce the maintenance demands (and therefore costs) over time by encouraging all machine operators to carry out basic maintenance on their own machinery. This would release maintenance workers to carry out other work. For the flesher operators, this would mean taking over the start-up and shutdown procedures and the cleaning and oiling of the machinery associated with the shutdown. However, since the procedures concerning cleaning and oiling, the adjusting of dials and the checking of readouts were all written, and since there was a Quality requirement that those who carried them out could read the procedures, maintenance workers were used for this purpose.

A further issue was that if anything went wrong with the fleshing machine, the operators were unable to express clearly to maintenance workers exactly what had happened which severely hampered the identification and solving of the problem, thereby automatically adding to the downtime of the machine.

Training would therefore need to enable operators:

- to learn the skills involved in the starting up and shutting down of the machine and to learn to read the associated written procedures;
- to undertake adjustments to the machine during processing to ensure the fleshing process was effective; and,
- to talk about the machinery and to explain what had happened to the machine before a maintenance task.

PROJECT TWO

Training program: The training of flesher operators to monitor fleshing standards and make adjustments for quality control

Goal: to reduce drum stoppages

The basic issue here is the effectiveness of the relationship between the machine and its operator. In the case of the flesher, the effective removal of the fat and connective tissue from the hide is essential before tanning begins. This is because the fat forms a barrier that inhibits the penetration of the process reagents. In addition, fleshing needs to be carried out to the appropriate Quality standards. If fleshing and trimming is not close enough to remove all the fat and connective tissue, the remaining material can come off during the tanning process and cause a number of problems. Namely, it can:

- block pumps and drains which then require cleaning by maintenance personnel;
- stop the tanning process because of the inability to pump liquors and continue the tanning process;
- increase waste treatment costs as a result of the material ending up in trade waste liquors;
- increase wear and tear on tanning vessels (drums); and,
- increase wastage of the fat which is made into tallow by the Company.

Training would therefore need to enable operators:

- to learn how to trim and flesh effectively to different required standards, and
- to learn the language associated with this so that effective communication concerning fleshing could take place on-the-job.

The training programs

For both 'projects', the EBT worked closely with the production managers and maintenance workers to design language and literacy inclusive training programs which targeted these two specific issues. With the aid of photographs taken specifically for the purpose, and workplace materials provided by workplace personnel, the EBT developed training programs associated with the two cited areas which covered:

- basic parts of the fleshing machine,
- terminology to describe faults and problems,
- occupational, health and safety issues and procedures associated with the machinery and chemicals,
- procedures for starting up and shutting down the machinery, and
- terminology associated with the different levels and standards of trimming and fleshing.

Evaluation

At the time of researching this case study, the two programs were still being run and empirical evidence was not immediately available. However, by the end of 1995, Towns was able to respond on the results of both projects.

As far as project one was concerned, he still had no figures that he could confidently quote. He wrote in a report to us:

> *"[Project One] has not been completed to the level to enable any empirical results to be made. However the Company believes the objective is relatively straightforward and will result in significant productivity gains."*

On Project Two, however, he was able to provide us with specific empirical evidence of its positive impact. As predicted, the impact was felt both in a reduction in drum stoppages and in a reduction in maintenance costs.

Reduced drum stoppages

Using daily records kept by the company on the reasons for stoppages, he provided the following data which covered the training period.

Month	Drum stoppages (hours) due to poor drainage	Cost of drum stoppages (@ $300 per hour delay)
April 1995	82	$24,600
November 1995	44	$13,200

The difference amounts to savings of $11,400 per month. Towns then asserted that 60% of this figure was due to the language and literacy inclusive training which has enabled the improvement of trimming and fleshing to the required standards.

Concerned that the 60% may have been a generous 'guestimate', the researcher asked how that percentage had been arrived at. The maintenance manager who had quoted the figure explained that small pieces of hide used to get caught in the tanning drums as a direct result of poor fleshing. Since the training, that problem had been completely eradicated. The maintenance manager's records showed that on average, this problem had accounted for 60% of drum stoppages. The other 40% of drum stoppages was caused by whole hides getting caught in the drums. There was no connection between this problem and the language and literacy inclusive training.

Towns therefore extrapolated from the figures that, as a direct consequence of the English language and literacy training, VHSP was now saving $6840[4] per month. Over one year, this represents a saving of $82,080 on reduced drum stoppages.

Towns' report went on to say:

> *"...there are savings in Maintenance costs through reducing the need for personnel to clean pumps and drains. This is estimated to save the Company some $10,670 per annum (2 fitters at $15 per hour and 30% on costs work for 60% of 38 hours per month)."*

The figures add up to a total annual saving of $92,750.

In sum

This case study has focussed solely on those two parts of the training program where specific cost savings directly linked to that training could be identified and be supported with empirical evidence. With an annual saving of over $90,000, it is clear that, if these were all that VHSP had gained from the training, the value to the company would still be enough to justify having done it.

Yet they are not the only gains. Towns completed his report to us by stating that the figures he had supplied were *"the minimal level of savings given the other savings for which cost estimates are unavailable."*

Towns freely recognises that there are many other factors which have led to improvements in VHSP's productivity - new technology, other training, new organisational structures, new professional personnel, new computerised monitoring systems. Again, as is evident in all the case studies, language and literacy inclusive training is only one of the factors. Nevertheless, Towns is quite convinced that the impact of the language and literacy inclusive training run at VHSP has been much more widespread than the $90,000 alone can represent.

> *"[There are quite a few gains here], some of which are measurable, some of which aren't so easily measurable but are still, nevertheless, real gains."*

The workforce has gained immeasurably in its readiness to train. Now better able to describe faults and problems, it is a workforce that can communicate not just with the maintenance worker but also with the team leader, the production manager, and the fellow workteam member. In other words, it is a workforce which can start to participate and to take on the roles and responsibilities which VHSP needs it to take on.

[4] This figure represents 60% of the quoted monthly saving of $11,400.

The extent to which language and literacy inclusive training is responsible for these improvements and how the value of that to the workplace may be assessed may be a question of judgement which, as Towns explained, only a responsible professional who knows his / her job can make.

Before VHSP became involved in this particular study, Towns said:

> *"The only evaluation that I did of [the language and literacy training program] was to ask the Production Manager: "Given all the problems you've got of co-ordinating and organising it, would you run it again?" And he said "Yes." He cited better communication as the major benefit. When you told someone to do something, you knew it was going to be done."*

Given that such a judgement comes from one whose task it is to make the workplace as competitive, productive and safe as possible, perhaps the most significant test of the value of such training is whether the workplace decides to continue with it or not.

On this point, VHSP is particularly interesting. During the various interviews for this case study, Towns indicated at several points that, because of enormous structural (both physical and organisational) changes planned for VHSP in 1996, the language and literacy inclusive training would not be resumed until 1997 once the 1995 programs finished. However, by February 1996, he had changed his mind. The training would go ahead in 1996, despite the obvious difficulties of implementation that he had considered too great only three months earlier.

From the first, Towns made the association between VHSP's plans for the future and language and literacy inclusive training. That association is now obviously too fundamental to his purpose for either element to be postponed.

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With special thanks to:

Geoff Towns, Company Secretary, Victorian Hide and Skin Producers Pty Ltd
Simon Wallace, former National WELL Co-ordinator, Australian Textile Clothing and Footwear Industry Training Board
Kristen Seps, Enterprise-Based Teacher-

Tanya Wolkenberg & Linda Wyse, researchers

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Case Study No. 8

Goodman Fielder Milling

Researched by Judy Duffy and Marie Manidis
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (Food)
Location	Both metro and non-metro, (NSW, VIC, QLD, SA, WA)	**Size of workplace**	Large

Workforce profile

Management	23	**Supervisory**	30		
Office	49	**'Shopfloor'**	331		
Auxiliary	22			**Total workforce**	550

Program details

Type of program B4 - Discrete program integrated with other workplace training program

Dates of program 1/1/94 **to** 1/12/94

Program participant

Number 20

Background Mostly ESB **Gender** Mostly male

Average length of program for participants 41 - 80 hours

Key influences in the workplac

1. Quality Assurance systems
2. Consultative Committees and workteams introduced
3.

Key effects of the language and literacy inclusive training

1. Direct cost savings
2. Reduced flour giveaway
3. Greater communication generally
4. Improved understanding of communication issues

Goodman Fielder Milling
Summer Hill, NSW

> *I thought, "If you can do it as a parent, why can't you do it in a buddy system set up at the mill?"*
>
> Paul Little, Skills Development Manager

The context

As the rails of the Summer Hill branch of the railway freight system draw to their end at the Goodman Fielder flour mill, they increasingly lose their metallic appearance until finally, in the delivery 'shed', they assume a mantle of dry snow. What follows is a fascinating four-or-five-storey-high "mad professor's machine" of suction pipes, tubes, shakers, sifters, separators, grinders, and pumps that between them gradually transport and process the grain into various grades of flour and associated products, such as wheatgerm.

Each product is stored in huge "silos". These are filled through overhead pipe systems and emptied via computer-controlled chutes directly into trucks waiting beneath them. From there, the product makes its way by road to the bakeries and cereal producers of the nation.

Goodman Fielder is an international company set up on a regional basis. Its three regions are Australia, Asia-Pacific, and Europe. Within a region the company has a number of core businesses. In Australia, these are Milling and Baking, Ingredients, Uncle Toby's and Meadow Lea.

The mill mentioned above is, of course, part of the company's milling and baking interests. In Australia, milling production involves 10 sites: six in NSW, and one apiece in Victoria, Queensland, South Australia, and Western Australia. Most of the workers at each site are male and many are from non-English-speaking backgrounds.

Goodman Fielder Milling (GFM) operates in a mature market which means that the maintenance of a high profit margin is difficult. In order to maintain the profit margins that *do* exist and thereby remain a viable company has meant making a commitment to Quality and service. But with the introduction of Quality Assurance systems and both consultative committees and work teams, the workforce has been required to use new skills. GFM recognised that many of its workers did not have these skills and would find it difficult to obtain or develop them without an improvement in communication skills at the same time.

Training

In 1993, the company's National Bargaining Unit (NBU), comprising representatives from all of its Australian sites, therefore developed a plan to address the communication needs of the

restructuring processes occurring at each of its sites. It was considered that GFM's workplace trainers and supervisors were best placed to assist workers whose communications skills limited their access to workplace training. As a result, a trainer support program was developed. With only small numbers of people at each site who actually required language and literacy support, the various usual options for providing training seemed unworkable.

Instead, a 'buddy' or mentor system was considered to be the most appropriate method for responding to the problem. The crucial elements of such a training program would need to be:

- raising awareness of language, literacy and numeracy issues in the workplace,
- giving those trainers and supervisors, who would act as mentors, a grounding in skills relating to learners with language and literacy difficulties, and
- encouraging the continuation of this process once the training provider was no longer on the scene.

The resultant Train the Trainer programs which were run between January and December 1994 reflected these goals very closely. Each program lasted for a total of six months, and programs were run at four GFM sites - one each in NSW, VIC, SA and QLD.

The program details

The training program consisted of three distinct elements:

1. Language, Literacy and Numeracy Awareness Seminars

   These ran for 2-3 hours and were delivered by the provider to audiences comprising management, supervisors, trainers, union representatives and some frontline operators

2. Train the Trainer - Communication Development Course

   These were run over a five-day period for groups of trainers and supervisors drawn from all ten of the GFM sites around Australia. Criteria for managers had been laid down for the selection of suitable training candidates. These recommended that nominees have good communication skills themselves, be sensitive to communication issues, and already have training and Train the Trainer experience.

   A total of 28 people were trained.

   The five-day program covered the areas of:

   - the purpose and language of on- and off-the-job training,

- communicating in a multicultural workplace,
- assessing spoken language, reading and writing abilities, and identifying training needs,
- how to take a language teaching approach to training,
- how to develop materials and training activities appropriate to trainees' needs, and
- how to help trainees with maths related needs.

3. Post-Course Case Studies and Follow-Up Workshops

Each of the 28 trainees was encouraged to take on a GFM worker at their own site who was in need of language, literacy and / or numeracy support in training. They were to use the skills gained during the five-day program to

- assess language / literacy / numeracy needs,
- develop a modified training program which recognised and addressed these identified needs,
- design activities to assist the trainee to improve in the required area, and
- report back to the Train the Trainer group at a one-day follow-up program.

As might be expected, there was more than a little apprehension on the part of the participants with regard to their capacity to take on the role of 'language / literacy / numeracy mentor.' Craig Roberts, Quality System Co-ordinator at the Summer Hill mill and one of the 28 participants, commented to this research project:

> *"I guess I was a bit skeptical to start with. I felt that we'd be spending a lot of our time teaching non-English speaking [background] people the English language. I didn't think that was our role."*

However, as each successive program was modified and improved based on the responses to the earlier programs, the comments started to change.

EVALUATION

Because there were 28 trainees across ten different worksites, it was not possible in this current study of 24 workplaces to follow up on all the participants to get their impressions of the impact of the training program on their particular workplace. This study was, however, able to gather information from nine of the participants: four from the Summer Hill and Tamworth mills in NSW, and three from the Tennyson mill in Queensland, and two from the North Fremantle mill in Western Australia.

Due to the fact that trainees were each acting as mentors for different individual workers in different locations performing different tasks, it is impossible to indicate a uniform, measurable impact of the training. Certain respondents have indicated that there has been a marginal improvement in time-saving. Others have cited cases of larger time-savings both for themselves as supervisors and for the workers. The estimates are of the order of two to three hours per week, but no monetary value was estimated.

There were, however, three of the respondents who cited monetary figures. Two of them (from the North Fremantle mill) estimated cost savings on the basis of time-saved both by themselves and others (including the 'mentee') multiplied by the appropriate hourly pay rates. The nature of the savings included:

- less supervising of workers to ensure understanding of job orders
- elimination of the need to use workplace 'interpreters'
- improved understanding of instructions
- clearer communication
- better use of calculators
- more accurate calculation of quantities and volumes of materials
- improved efficiency and effectiveness of workplace training
- increased worker autonomy in language / literacy / numeracy-related workplace tasks
- improved legibility and speed of completion of batch documentation

Interviewed separately, the two respondents' total savings figures were respectively $395 per week and $439 per week. Extrapolated to a yearly figure, this represents savings of $20,540 and $22,828 respectively, or an estimated average of $21,700 saved per annum. It should however be borne in mind that these were estimated savings and there were no workplace statistics available to corroborate the claims.

Reducing flour giveaway

One result from this training program which could be supported with empirical evidence, however, came from Craig Roberts (quoted earlier as "skeptical to start with"), Quality Systems Co-ordinator at the Summer Hill mill.

It concerns the issue of flour giveaway in the packing section. In this area, flour is packed into reinforced paper bags. The bags are placed over the end of a feeder chute and, by switching on

and off the flow of flour, the bags are filled. There is a standard weight of flour to be put in each bag, but it is quite easy for an operator to put more in the bag than is required. This surplus is called 'flour giveaway'. Over time, the loss can run into hundreds if not thousands of dollars which in this profit-margin-sensitive industry is very significant.

Roberts considered that there was a need to streamline the packing system at the Summer Hill mill. Objectives were set to reduce the amount of flour giveaway and procedures were written governing the packing task. However, with workers whose language and literacy skills were not the strongest, only so much could be explained and achieved. That was before the language and literacy Train the Trainer program.

After the program, Roberts commented:

> *"I trained all the packing guys. I ran through the packing system, explained things, taught them how to read it and what things meant, and through that, they could control the system better and make improvements to it, just using their own knowledge to save flour giveaway."*

Because of the training, Roberts said that he first planned out and wrote down what he needed the workers to understand. He then sat down with them and went through it with them on paper, drawing on the skills he had learned during the training program. At the end of the process, the workers were able to demonstrate to him that they now understood what was needed. When asked whether he would have gone about it that way without the training program, he tellingly stated:

> *"I don't think I would have approached it that way. I might have just gone in there, been narrow-minded, and maybe not have used the patience that I could have, maybe not have identified what they needed, because some of these guys couldn't speak [English], some guys couldn't read, some couldn't write - and these were problems I didn't know before actually, it's been the hardest bit [for me] to have these problems [and not know what to do]."*

A file was kept on the bag weights, and Roberts monitored the flour giveaway rates. At the same time as this was going on, the flour packing team was also revising the written procedures. Roberts indicated that he took a back seat in this process, both in order to give ownership of the procedures to the workers themselves, and because he did not have the time to do the job himself - an indication of the significance of the workers' ability to take on this task.

Roberts also stated that during the whole period, the team comprised the same workers. It is therefore quite clear that any improvements in the figures would be a direct result of the improved ability to communicate and understand what was required.

The team revised the written procedures twice; first at the end of January 1995, and again in early May 1995. Figure 1, provided by Roberts, clearly shows the positive effects of the revisions, with an instantaneous drop in flour giveaway being recorded on each occasion. Following this,

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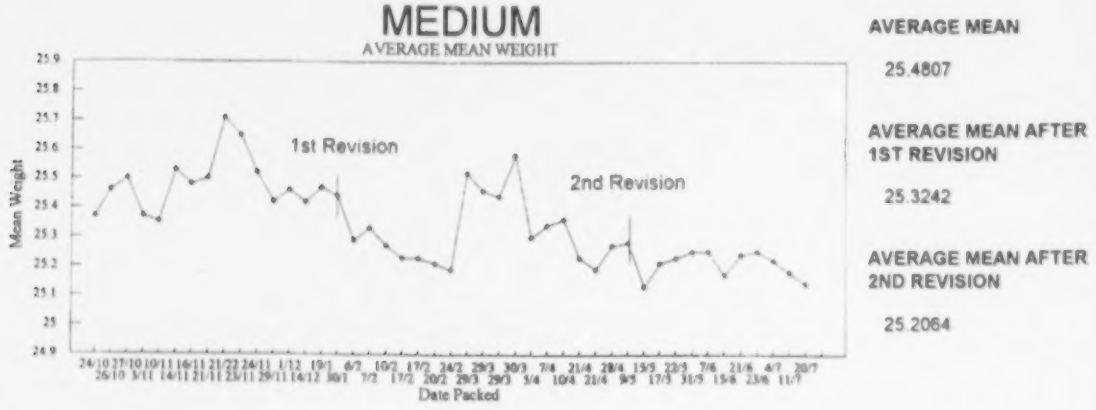
Table 1 gives the figures (also provided by Roberts) which highlight the monetary savings which have accrued from the noted reductions in flour giveaway.



Month	Packed Mean	gm's Reduced	Bags Packed	List Price (per 1000kg)	Savings
October 1994	25.48	0	1350	$737.45	$0.00
November	25.48	0	5274	$737.45	$0.00
December	25.48	0	1566	$737.45	$0.00
January 1995	25.48	0	978	$737.45	$0.00
February	25.324	0.156	2095	$737.45	$241.01
March	25.324	0.156	1073	$737.45	$123.44
April	25.324	0.156	1839	$737.45	$211.56
May	25.206	0.274	1824	$737.45	$368.56
June	25.206	0.274	1728	$737.45	$349.16
July	25.206	0.274	1487	$737.45	$300.47
			TOTAL		**$1594.20 per six months**
AVERAGE MONTH	**25.206**	**0.274**	**1921.4**	**$737.45**	**$388.24 per month**

Table 1: Summary of Flour Giveaway ('Medium' Flour Grade)

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Roberts explained that the monthly savings figure of $388.24 was calculated by multiplying the monthly average 'grams reduced' figure with the monthly average 'bags packed' figure. This gave an average monthly saving of 526 kg in flour giveaway. This figure was then multiplied by $0.73745 (the price per kilogram). Extrapolated to a year (which Roberts contended was quite in order), the average flour giveaway savings on Medium Grade Flour at the Summer Hill equates to $4,660. When asked in April 1996 whether there had been any deterioration in these figures, Roberts said that he could not be 100 per cent certain because the monitoring had been discontinued after July 1995. However, he felt that it was very unlikely that there had been since the packing team had not made any mention of problems in this area.

The figures may appear to some to be quite modest, but there are three points to be borne in mind:

- such savings in this particular industry represent a worthwhile gain
- the work on the written procedures may be applied to other mills in the company where similar packing systems are operating
- the savings that are made here represent only one small change in the workplace. If such small changes lead to such gains when workers are involved in the process, thinking and procedures of their work, it would not be extrapolating too much to consider that such gains may be similarly achievable in other areas of the workplace. Indeed, the gains described by the Western Australian respondents, although not empirically measured, would seem to indicate that this was far from being an unreasonable suggestion.

In sum

The Goodman Fielder experience has been interesting because of the nature of the program they put in place which was a clear departure from the usual methods of delivering language and literacy inclusive training in the workplace. It is interesting to note too that the Train the Trainer / mentor system idea came from the workplace itself which deemed the more usual methods unworkable in the context of their particular set-up.

As with other case studies, this research study has been fortunate to identify an effect of the training program at GFM which is taken out of the realm of conjecture by the availability of workplace-generated statistics. The figures suggest a $4,660 gain in reductions of flour giveaway has resulted directly from the training program's effect on how one supervisor approached the problem of workers with weak language and literacy skills. Two other respondents suggested estimated time-savings which on an annual basis equate to approximately $21,700.

However, we should avoid the superficial perception that the quantifiable gain is necessarily the only monetary gain, or indeed the only worthwhile gain. It is clear that without statistical evidence, no clear figure can be confirmed, but a lack of statistical evidence does not of itself prove that there have been no gains.

We should remember, too, that the statistics regarding the reduction in flour giveaway were not generated by the workplace in order to prove the worth of the training program. Respondents

and management at GFM had already accepted the value of the training program before any measuring had taken place. The flour giveaway figures were generated because they were of importance to the workplace and to improving its efficiency and profitability, not to evaluate the impact of the training program.

GFM no doubt consider that the association this research project has now made between their language and literacy mentoring program and measurable gains in the workplace is simply a corroboration of what they already sensed should result from addressing the problem of poor communication skills in this way. We should therefore seek neither to undermine the value of what empirical measurement is possible in such circumstances nor to overstate its importance, but rather to keep it in perspective.

For GFM, the statistical evidence, such as it is, shows that it was worth trying to do something about the problem. They, on the other hand, would be the first to point out that, whether there were any statistics or not, they simply had no choice but to do something about the problem in the first place.

Since it is likely that Roberts would have had to intervene in the packing section anyway, what really appears to have made the difference in this case is the quality of that intervention, and that is where the significance of this training program really lies.

◊

Special thanks to:

Paul Little, Skills Development Manager, GFM (Summer Hill)
Graig Roberts, Quality System Co-ordinator, GFM (Summer Hill)
Julie McQueen, FILLIP Manager, National Food Industry Training Council

The Trainers and Supervisors from the Summer Hill, Tamworth, Tennyson, and North Fremantle mills

Judy Duffy and Marie Manidis, Researchers

Case Study No.9

Don Smallgoods

Researched byTanya Wolkenberg and Linda Wyse
Written by Geoff Pearson

Details at a glance

Industry sector	Private	**Industry category**	Manufacturing (Food)
Location	Metropolitan Area, Altona North, VIC	**Size of workplace**	Large

Workforce profile

Management	12	**Supervisory**	12		
Office	20	**'Shopfloor'**	320		
Auxiliary	70			**Total workforce**	434

Program details

Type of program B2 - Discrete program integrated with industry certificate

Dates of program 1/1/92 **to** 1/12/96

Program participant

Number 41

Background Mostly NESB **Gender** Mostly male

Average length of program for participants 80 -100 hours

Key influences in the workplac

1. Quality accreditation
2. Award restructuring and multi-skilling
3. Introduction of new technology

Key effects of the language and literacy inclusive training

1. Access to further training
2. Promotion of personnel
3. Greater communication with the shopfloor
4. Use of Plain English

Don Smallgoods
Altona North, VIC

> *I think there is an element of 'leap of faith', to be perfectly frank, because we don't have hard, cold data that says in this environment by training people in these things that we will necessarily get a return. But it's our belief that we will. And we are seeing, again without being able to measure anything in quantifiable terms, we are seeing the benefits starting to flow. We are seeing people who are now more flexible and can be moved from one area to another; we are seeing people coming on and contributing things to the organisation; we are seeing...a lift in self-esteem, a lift in their desire to do well, and I think these things are beneficial - to the individual and certainly to the company.*
>
> Bill Dowling, Human Resources Manager

The context

As one crosses the broad, quadrangle around which the Don Smallgoods plant buildings are arranged, there is an immediate impression of a mélange of today and yesterday - the entrance with all the accoutrements of a modern, automatic security gate; the worn, fissured concrete parking area, traversed overhead by the odd iron pipe which has long since ceased to play a part in the work of the site; the neat, well-appointed and well-equipped training section rooms and laboratories dwarfed by the imposing edifice of the 1950s manufacturing plant.

And the impression continues once inside. The machinery of yesterday chops and grinds, whilst that of today counts and weighs, and while the latest technology is used in one part of the plant to monitor and regulate the coldrooms to ensure they stay within the acceptable temperature range, just across the way, salamis and wursts are slowly smoked in huge wooden-doored darkrooms the traditional way, with a handful of wood-shavings added manually every so often to the smoking embers which litter the floor.

This juxtaposition of old and new, traditional and modern, is a visual and physical metaphor for the structural changes that the company has been faced with over the last five years. With an ever-increasing need to maintain its competitive edge in the national marketplace and to extend its already strong growth in exports, the traditional recipe of workplace organisation and management contained certain ingredients that have needed to be changed in order to make sure that the product itself would consistently meet the markets' demands for quality at competitive prices.

One of the key ingredients, of course, was the workforce itself whose profile reflects the norm for the food industry in general, and the smallgoods industry in particular. That is, a workforce which is 90% non-English-speaking-background, predominantly from southern European countries, and contains a large number of female workers. Many had literacy difficulties in their own languages, having been deprived of education by the ravages of war or simply through the

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migration experience and the need to gain work ahead of language proficiency in order to survive in a new country.

Regardless of the causes, what faced Don Smallgoods was the task of implementing workplace change. In the case of the workforce, this meant removing the barriers so that the workers could respond to the various demands of Total Quality Management, award restructuring, multiskilling and the introduction of new technology.

The training

In response to the language issue in the workplace, Training Manager, Michael Murphy, submitted for Food Industry Language and Literacy Initiative Program (FILLIP) funds at the end of 1991. The submission was successful and in 1992 the first training programs were set up. A local training provider worked closely with Murphy, carrying out a language and literacy audit using the ASLPR[1] scale to establish a profile of worker language and literacy needs.

It was evident from this that there would need to be various target groups. As the final report for 1992-93 FILLIP Project from the workplace stated:

> *"Following a number of different approaches, we have achieved a system that is accepted by all stakeholders. This has required considerable negotiation, co-ordination, compromise, and marketing. We believe that we now have attained a workplace culture that has accepted structured training as a normal part of the work: there's recognition that the organisation must have better trained people to meet future challenges and that the individual must upgrade his or her skills to meet the demands of the changing workplace."*

The "approaches" referred to were, to continue our earlier metaphor, a mix of both traditional and new. There were three types of training group:

1. English language classes for workers with very low ASLPR ratings - that is, general English classes focussing of the macroskills of reading, writing, speaking and listening

2. Integrated Certificate of Food Processing (Smallgoods Manufacturing) and English support classes with both a technical subject expert teacher and an English support teacher. These groups focussed on various modules of the CFP including Hygiene and Sanitation A and B (four units in all).

3. The Don Company Newsletter writing group

[1] Australian Second Language Proficiency Rating

The Don newsletter group

The basic English classes and the language and literacy inclusive Certificate in Food Processing courses focussing on the Hygiene and Sanitation modules were the "traditional" element in the training program at Don. These were very successful, as we shall see later in the case study. The innovative element, however, was the Don Newsletter Group, and because of its innovative nature, this group will be the central focus of this case study.

The impetus for this approach arose from the need to find and exploit communication channels which would help to inform and encourage discussion among the workforce about the workplace changes which needed to occur. As the training provider's June 1995 program report explained:

> *"The company had, for many years, produced a newsletter. However, it was not read by a large number of employees, partly because accessing complex printed text can be difficult for people from a non-English-speaking background and partly due to a perceived lack of interest."*

As a consequence, the training provider suggested re-vamping the newsletter, and using it as a learning-in-action tool by giving its development and production over to participants in the language and literacy inclusive training program. The argument was that doing this would be likely to have several benefits. It would:

1. provide information in a more accessible, Plain English format to all employees of the company. This is because the writers would be drawn from the very body of the target audience;

2. provide a model of the successful functioning of a team which would develop the skills of discussing, negotiating, and reaching a consensus through a collaborative approach;

3. give the participants an opportunity to develop their language and literacy skills for a specific and "living" context; and

4. give the participants the opportunity to fulfil the assessment criteria required for the Industrial Communications Modules A, B and C of the Certificate of Food Processing.

The company agreed. Workers were invited to volunteer to join a group which would take over the responsibility of producing the company newsletter.

Certain selection criteria were put in place to ensure that volunteers would be capable of success. These concerned the volunteers' language levels[2], department and shift. On the question of language levels, it was felt that in a group situation, a variety of levels could be accommodated,

[2] Measured on the Australian Second Language Proficiency Rating (ASLPR) scale.

and therefore part of the group could be made up of people with lower-level English language proficiency ratings.

Because of the nature of the program, it was impossible to accurately predict the course content; this was largely determined by what information had to be presented through the newsletter. However, because of the multitude of language and literacy skills required for the task of producing a newsletter, a broad range of skills was developed by the group. These included:

Skills Area	Item
Speaking	• agreeing / disagreeing • clarifying meaning • presenting an opinion • presenting information • turn-taking • offering suggestions • checking for understanding • summarising • acknowledging different audiences • negotiating outcomes • repairing strategies • acknowledging cultural and gender issues in communication
Reading	• skimming • scanning • predicting meaning • summarising • critical analysis
Writing	• displaying a knowledge of written conventions (e.g. spelling, punctuation, sentence structure, paragraphing, sequencing) • acknowledging and writing to the needs of different audiences • writing in Plain English • note-taking • analysing genre

The whole process of producing a newsletter for actual publication and distribution meant that the group were working for a real purpose which was likely to have immediate impact in the

workplace. As a result, the group took its task very seriously, developing an operational methodology which any outside observer will immediately see as relevant in any number of workplace contexts where change is a key factor. The stages of the methodology were:

- identification of the sort of information the group believed was important to incorporate into the newsletter
- allocation of tasks to each group participant
- collection of information
- discussion of collected information
- writing and editing of associated articles / reports based on the information
- laying out of the newsletter

Those familiar with the problem-solving activities of workteam meetings will be able to see an immediate correlation with the first four stages above. But more than this, the work of the group brought them into contact with the issues of workplace change on a regular basis. The task of producing the newsletter also then gave them a mechanism for reviewing the information and presenting it in a form which was more likely to reach the workers on the shopfloor because the writers were a part of the same body of people they were writing for.

The work of the newsletter group (or perhaps we should say groups, since there has been a change in the make-up of the group over time) has involved them in writing, editing and presenting information in the following areas:

- Rewriting the Enterprise Agreement in Plain English
- Reports from various committees (e.g. OH&S)
- Company news
- Production reports
- Departmental news
- Staff news
- Union news
- Training news
- Surveys
- Sports reports
- Personal profiles of workers

Bill Dowling, HR Manager at Don, said of one of the policy issues dealt with in the newsletter:

> *"We put out a policy on sexual harassment, and then we had the newsletter group actually 'translate' it, if you like, into common language terminology with the aid of some cartoons as well. ... language and literacy hasn't driven that, but it has been a significant aid in enabling that to be effective."*

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As a result of the newsgroup-based training program, the participants established a cohesive and supportive environment in which they helped each other with their collective task, and feel that they have not simply improved their workplace language and literacy skills but also that they have made a useful contribution to the life of the workplace.

EVALUATION

Training achievements

There were 85 workers involved in the three forms of language and literacy inclusive training run at Don. Of these, some 56 completed the three units of Hygiene and Sanitation A: Personal Hygiene, Protective Clothing, and Cleaning and Sanitation from the Certificate in Food Processing.

Of these, 20 also completed the Foreign Objects unit of the Hygiene and Sanitation B Module.

Of the newsletter group, six of the original eight members achieved all three of the Industrial Communications modules.

A 'spin-off' of both the traditional class-based training and the newsletter group training has been that several of the workers have gone on to other training or to take advantage of internal promotion opportunities. Dowling, when questioned by this research team, was so aware of the achievements that he was able to reel them off without any necessity to refer to files or results tables.

> *"We know that [the language and literacy inclusive training] is starting to hit the mark in the sense that a number of the 'graduates' of the first newsletter group have gone on to do a two-hundred-hour [National Certificate of Food Processing] smallgoods training course and have subsequently been passed and been accredited with those modules.*
>
> *We have another woman who's gone and done an office and management course at VUT [Victorian University of Technology] and she has progressed from the lowest level in the workplace to now working in our laboratory [in 12 - 18 months].*
>
> *There have been a number of women who have acquired a tremendous amount of confidence in themselves. We've now got two of those in supervisory or leading-hand-type roles.*
>
> *At the same time we have got other people who are now undertaking a range of other modules of the National Certificate as a result of their being able to acquire English skills.*

And overall, you can see the level of skill in the organisation creeping up."

But what of the impact on the workplace of the newsletter being handed over to a group of workers to produce? Did this have any effect on the number of people reading it, and on people becoming more informed about the workplace and the changes?

In September 1994, the group ran a survey of Don employees in order to establish *"whether people read it, what they think of it, and what we can do to improve it."*

There were 82 responses (roughly 25% of the shopfloor). The responses (represented graphically in Figure 1) were very favourable.

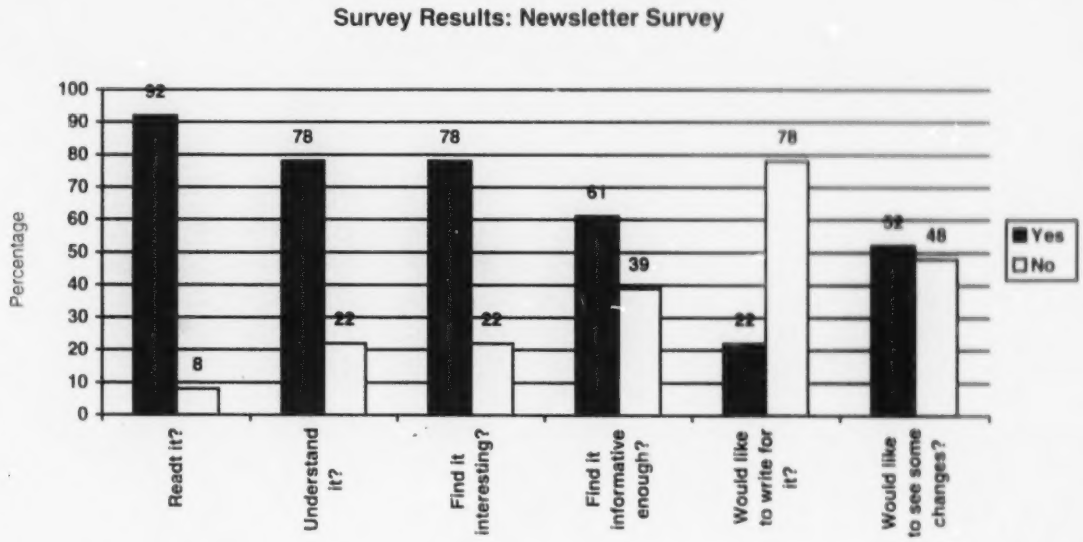

Figure 1: Newsletter Survey Results, September 1994

The survey indicated that the vast majority of respondents not only read the newsletter but understood it and found it interesting. However, although both management and workers indicated to this research project that there had been a marked increase in the number of readers, the figures from their own survey could not be used to show this, since they had not asked respondents to indicate whether they were "new" readers or not.

For this reason, this research project ran a similar survey distributed through the newsletter in October 1995. Unfortunately, there were only 22 responses which statistically does not give us much room for interpretation. This said, the figures do roughly correlate with the earlier survey. On the most important issue, 17 of the 22 indicated that they had noticed a change in the newsletter since the newsletter group took over the job. Of those who bothered to indicate what changes they had perceived, the highest rating answer (13 respondents) indicated that the newsletter was now easier to read.

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Although not conclusive, the figures do all point in the right direction, and, put together with the other indicators of success for the participants and the general consensus of opinion that the newsletter's readership has greatly increased, it is reasonable to state that the newsletter group has had a considerable impact in this workplace, both in terms of disseminating information about workplace change, and in the groups' members improving their own skills.

In sum

The language and literacy inclusive training run at Don Smallgoods is interesting in that, through the development of its newsletter group, it has provided an innovative and very appropriate form of workplace language and literacy training which goes beyond the scope of the traditional class-based model. This approach has provided a particular group of workers with a very active form of language and literacy skills development.

To say the least, however, the notion of a newsletter group was a risky undertaking from everyone's perspective. For the training provider who proposed it, there were the unknown variables of how well the participants would take to the task and how much time it would take to get them working effectively as a team. For management, there was a risk in relinquishing control over the content and presentation of the newsletter and putting it in the hands of the workers involved, workers who traditionally had not been involved in workplace communication processes. And for the participants themselves, there was also a considerable risk. They were taking on a task about which they knew little, and, in the process, would be exposing themselves to the scrutiny and potential ridicule of their 'shopfloor' peers if they failed.

The fact that there was such a risk for all parties has, however, has meant that the exercise has been much more than just a training program; it was an opportunity for all parties to learn in a very practical sense to see things differently and to seek innovative solutions to difficulties. For the participants, they have gained enormously in their self-confidence, their sense of self worth and their ability to meet challenges. For management, they have gained greatly from the experience of seeing at least part of their workforce operating in a different way and that innovative methods supported by a professional language and literacy training provider can bring broad-based rewards. For the training provider, the experience has been an opportunity to work much more closely, and in many ways, more meaningfully with the workplace than the traditional class-based model often allows.

In seeking to highlight the usefulness of the innovative newsletter group approach to training, we should, however, not seek to negate the effects of the class-based training which have also been significant in allowing many of the shopfloor workers to achieve training goals which would otherwise have been much less readily attainable.

We need also to note that while the newsletter group was working on improving the readability and accessibility of the company newsletter, the other training was to some extent instrumental in giving many in the workforce the work-related reading skills required to understand it more fully. In other words, a mix of methods traditional and new have combined to improve the workplace's chances of communicating the change they seek to carry out by helping to remove barriers to understanding.

As Dowling explained,

> *"Undoubtedly the more highly skilled your people are, the better they understand the processes. The better they understand why they're doing something, the better they understand the importance of what they're doing, and the more they can contribute to the organisation's success. An example of that is some of our recent contracts that we've been able to win. In times past, we would have great difficulty in trying to convey to the workforce just how important a trial was that they were doing for a particular new customer. Now you're able to say that to people - you say, "Look, this is a very important potential contract. It means a lot of work, a lot of hours, it's good for the company, it's good for the people who are working for the company." We're now able to convey those sorts of things to people far more easily."*

Dowling does not claim for one moment that it is the language and literacy inclusive training or the work of the newsletter group alone which have been responsible for such changes, but he recognises that English language competence is a fundamental element in the equation.

Without that element, the equation is incomplete and therefore insoluble.

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Sincere thanks to:

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Tanya Wolkenberg & Linda Wyse, Researchers

[3] Australian Meat Industry Employees Union